Road Rules, 2011

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Title 14 of the California Code of Regulations (14 CCR)

~FPC EDITS TO DATE INDICATED IN TRACK CHANGES FORMAT~

Amend:

§ 895.1 Definitions

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§ 914.8 [934.8, 954.8] Tractor Road Watercourse Crossing

§ 915.1 [934.8, 954.8] Use of Heavy Equipment for Site Preparation

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Article 12 [Article 11. Northern] Logging Roads and Landings

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§ 1051.1 Contents of Modified THP

§ 1090.5 Contents of NTMP

§ 1090.7 Notice of Timber Operations Content

§ 1092.09 PTHP Contents

§ 1093.2 Contents of Road Management Plan

§ 1104.1 Conversion Exemptions

Adopt:

§ 923.10 [943.10, 963.10] Planning for Logging Road Watercourse Crossings

§ 923.11 [943.11, 963.11] Logging Road Watercourse Crossing Design and Implementation

§ 923.12 [943.12, 963.12] Logging Road Watercourse Crossing Mapping and Identification

§ 923.13 [943.13, 963.13] Logging Road Watercourse Crossing Construction and Reconstruction

§ 923.14 [943.14, 963.14] Logging Road Watercourse Erosion Control

§ 923.15 [943.15, 963.15] Logging Road Watercourse Use

§ 923.16 [943.16, 963.16] Logging Road Watercourse Crossing Maintenance and Monitoring

§ 923.17 [943.17, 963.17] Logging Road Watercourse Crossing Removal

Note: Proposed new or relocated text in underscore. Deleted existing text in ~~strikeout~~

Amend 14 CCR § 895.1. Definitions.

Abandoned Road means a logging road on which proactive measures have been applied to effectively remove it from the permanent road network.

Abandonment means ~~leaving a logging road reasonably impassable to standard production four wheel drive highway vehicles, and leaving a logging road and landings, in a condition which provides for long-term functioning of erosion controls with little or no continuing maintenance.~~ ~~taking proactive~~implementing measures to effectively remove an existing logging road, landing, or logging road watercourse crossing from the permanent road network.

Appurtenant Road means a logging road under the ownership or control of the timber owner, timberland owner, timber operator, or plan submitter that will be used for log hauling ~~and that is between the plan area and the first public road to be used for log hauling~~.

Berm means ~~a curb or dike constructed to control water and prevent roadway runoff waters from discharging onto roadside slopes and/or to provide material for subsequent road maintenance.~~a curb, dike, or linear mound of earth that is constructed to control water and direct roadway runoff waters or that has developed through road grading activities.

Connected Headwall Swale means a geomorphic feature consisting of a ~~bowl-shaped,~~ concave depression with convergent slopes, typically of 65 percent or greater steepness that is connected to a watercourse or lake by way of a continuous linear depression and that has been sculpted over geologic time by shallow landslide events. The slope profile is typically smooth and unbroken by benches, but may be interrupted by recent landslide deposits or scars. Emergent groundwater and wet areas may exist at the base of the swale. Soil and colluvium depth is typically greatest at the axis of the swale, thinning to either side.

Critical Dip means a constructed dip or low point across a logging road surface ~~immediately~~ down grade from, or over, a ~~culverted~~ logging road watercourse crossing that functions to prevent crossing overflow from draining down the road and minimizes fill erosion.

Crowning means creating a road surface with a convex cross sectional profile that drains runoff toward both sides of the road.

Deactivated Road means a logging road that is part of the permanent road network where ~~proactive~~ measures have been ~~applied~~ implemented to prevent active use by logging trucks and standard production four-wheel drive highway vehicles.

Deactivation means ~~taking the proactive~~implementing measures necessary to prevent the active use of an existing logging road, landing, or logging road watercourse crossing.

~~**End Hauling** means the removal and transportation of excavated excess excavated material to prevent sidecast to a designated storage area.~~

Excess Material means excavated material that is not used ~~or needed~~ as a functional part of the road or ~~a~~ landing. Excess material is synonymous with spoils.

Extended Wet Weather Period means the period from October 15 to May 1.

Fill means material that is mechanically placed ~~in low areas~~ and built up in compacted lifts to form a ~~the~~ roadbed or landing surface. Fill includes the material placed around culverts and related drainage structures at logging road watercourse crossings.

Ford means a logging road watercourse crossing where the road grade dips through the watercourse channel.

Harvest Area means the area where trees are felled and removed.

Hydrologic Disconnection means the removal of direct routes of drainage or overland flow of road runoff to a watercourse or lake. ~~by directing drainage or overland flow onto stable portions of the forest floor to dissipate energy, facilitate percolation, and resist or prevent erosion or channelization.~~

Insloping means shaping the logging road or landing surface to drain toward a cutbank or inside ditch.

Outsloping means shaping the road surface to drain toward the outside edge of the logging road or landing.

Permanent Road means ~~a road which is planned and constructed to be part of a permanent all-season transportation facility. These roads have a surface which is suitable for the hauling of forest products throughout the entire winter period and have drainage structures, if any, at watercourse crossings which will accommodate the fifty year flood flow. Normally they are maintained during the winter period.~~ a logging road that is part of the permanent road network and is designed ~~planned, constructed, and maintained~~ for year-round use. These roads have a surface that is suitable for maintaining a stable operating surface throughout the year.

Permanent Road Network means the permanent, seasonal, ~~and~~ temporary, and deactivated roads, including appurtenant roads, that provide the infrastructure necessary for timber operations and forest management.

Permanent Watercourse Crossing means a watercourse crossing that ~~will be constructed to accommodate the estimated fifty-year flood flow and~~ will remain in place when timber operations have been completed.

Prescribed Maintenance Period means the time period, beginning with filing of the work completion report, provided that the report is subsequently approved, during which erosion controls ~~which~~ that are required and constructed as part of ~~a~~ timber operations must be maintained in a functional condition. ~~The period shall not exceed three years from the filing of the work completion report provided that the report is subsequently approved by the director.~~

STAFF NOTE: REVISED DEFINITION OF "RECONSTRUCTED ROADS" WAS NOT INCLUDED IN 90-DAY NOTICED RULE TEXT. DEFINITION REVISED DURING JUNE 5, 2012 FPC DISCUSSION AND REVISION OF "ROAD MAINTENANCE" DEFINITION.
Reconstructed Roads means those existing roads that are to be restored or improved to make useable for hauling forest products; "reconstructed" does not include ~~routine or annual~~ road maintenance or rehabilitation that does not require substantial change in the original prism of the road.

~~**Public Road** means a road open to the general public which is: (a) in the a Federal, State, or County, or City road system, or (b) a road on which a public agency has deeded, unlimited easement.~~

Road approach means the portion of the logging road surface that drains overland water flow to the watercourse crossing. ~~Road approaches begin/end at the nearest functional drainage structure/facility or the first high point on the road where road surface overland water flow drains away from the watercourse crossings. Crossings often have two road approaches.~~

Road Maintenance means activities ~~involving manipulation of~~that do not require substantial change to the logging road prism to maintain stable operating surfaces, functioning logging road drainage facilities and structures, and stable cutbanks and fill slopes. Examples of road maintenance may include ~~shaping and/or~~ rocking a road surface; localized shaping or outsloping; installation and maintenance of rolling and critical dips; restoring functional capacity of inboard ditches, cross drains, or culverts; and repairing water bars.

Road Prism means all parts of a road including cut banks, ditches, road surfaces, road shoulders, and road fills.

Seasonal Road means a ~~road which is planned and constructed as part of a permanent transportation facility where: 1) commercial hauling may be discontinued during the winter period, or 2) the landowner desires continuation of access for fire control, forest management activities,~~

~~Christmas tree growing, or for occasional or incidental use for harvesting of minor forest products, or similar activities. These roads have a surface adequate for hauling of forest products in the non-winter periods, and in the extended dry periods or hard frozen conditions occurring during the winter period; and have drainage structures, if any, at watercourse crossing which will accommodate the fifty-year flood flow. Some maintenance usually is required~~ logging road that is part of the permanent road network ~~where use is generally discontinued during the winter period~~that is not designed for year-round use. These roads have a surface that is suitable for maintaining a stable operating surface during the season of use.

STAFF NOTE: REVISED DEFINITION OF "SEASONAL ROAD" MAY REQUIRE ADDITIONAL REVIEW AS A RESULT OF DISCUSSION OF § 1034 REVISIONS.

Sidecast means excess earthen material pushed or dumped ~~to or~~ over the side of a road~~s~~ or landing~~s~~.

Significant ~~sediment~~ Sediment ~~discharge~~ Discharge means soil erosion that is currently, or may be in the future, discharged to watercourses or lakes in quantities that violate ~~of~~ Water Quality Requirements or result in significant individual or cumulative adverse impacts to the beneficial uses of water. One indicator of a Significant Sediment Discharge is a visible increase in turbidity to receiving Class I, II, III, or IV waters.

Significant existing or potential erosion site means a location where soil erosion is currently, or may be in the future, discharged to watercourses or lakes in quantities that violate Water Quality Requirements or result in significant individual or cumulative adverse impacts to the beneficial uses of water. ~~A site that is eroding but is not delivering, or does not have the potential to deliver sediment to a water body, is not a significant existing or potential erosion site.~~

Temporary Road means a logging road that is to be used only during ~~the~~ timber operations and that will be deactivated or abandoned upon completion of use. ~~These roads have a surface adequate for seasonal logging use and have drainage structures, if any, adequate to carry the anticipated flow of water during the period of use.~~

Through Cut means a section of road that lies below the adjacent ground level on both sides of the road.

~~**Through Fill** means a section of road upon constructed fill that lies above the adjacent ground level on both sides of the road.~~

STAFF NOTE: PROPOSED INCLUSION OF A REVISED VERSION OF § 914.6(b) WAS NOT INCLUDED, BUT MAY BE RECONSIDERED DURING FPC DISCUSSION OF § 1034.

Amend 14 CCR § 914.7 [934.7, 954.7]. Timber Operations, Winter Period.

During the winter period:

(a) Mechanical site preparation and timber harvesting, shall not be conducted unless a winter period operating plan is incorporated in the

timber harvesting plan and is followed, or unless the requirements of subsection (c) are met. Cable, helicopter and balloon yarding methods are exempted.

(b) The winter period operating plan shall include the specific measures to be taken in winter timber operations to ~~minimize damage due to~~avoid or substantially lessen erosion, ~~soil movement~~sediment transport into watercourses, and soil compaction from felling, yarding, loading, mechanical site preparation, and erosion control activities. A winter period operating plan shall address the following subjects:

(1) Erosion hazard rating.

(2) Mechanical site preparation methods.

(3) Yarding system (constructed skid trails and tractor road watercourse crossings).

(4) Operating Period.

(5) Erosion control facilities timing.

(6) Consideration of form of precipitation-rain or snow.

(7) Ground conditions (soil moisture condition, frozen).

(8) Silvicultural system-ground cover.

(9) Operations within the WLPZ.

(10) Equipment use limitations.

(11) Known unstable areas.

(12) Logging roads and landings.

(c) In lieu of a winter period operating plan, the RPF can specify the following measures in the THP:

(1) Tractor yarding or the use of tractors for constructing

layouts, firebreaks or other tractor roads shall be done only during dry, rainless periods and shall not be conducted on saturated soils conditions that may produce significant sediment discharge. ~~sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or that violate Water Quality Requirements.~~

Amend § 914.8 [934.8, 954.8] Tractor Road Watercourse Crossing

(d) Tractor road ~~W~~watercourse crossing facilities ~~not constructed to permanent crossing standards on tractor roads~~ shall be removed and stabilized before the beginning of the winter period~~. If a watercourse crossing is to be removed, it shall be removed in accordance with~~ to the standards of 14 CCR § ~~923.3(d) [943.3(d), 963.3(d)]~~ 923.17 [943.17, 963.17], subsections (a)-(c), or as specified in the winter period operating plan. The RPF may propose an exception if explained and justified in the plan, and found by the Director to be in conformance with this article.

Amend 14 CCR § 915.1 [935.1, 955.1]. Use of Heavy Equipment for Site Preparation.

(a) Use of heavy equipment for site preparation shall comply with the provisions set forth in 14 CCR 914.2 [934.2, 954.2].

(b) Heavy equipment shall not be used for site preparation under saturated soil conditions that may produce significant sediment discharge ~~sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II,~~

~~III or IV waters; that violate Water Quality Requirements~~; or when it cannot operate under its own power due to wet conditions.

Amend § 916.3 [936.3, 956.3]. General Limitations Near Watercourses, Lakes, Marshes, Meadows and Other Wet Areas

(c) The timber operator shall not ~~construct or reconstruct roads,~~ construct or use tractor roads ~~or landings~~ in Class I, II, III or IV watercourses, in the WLPZ, marshes, wet meadows, and other wet areas unless when explained and justified in the ~~THP~~ plan by the RPF, and approved by the Director, except as follows:

(1) At prepared tractor road crossings as described in 14 CCR § 914.8(b) [934.8(b), 954.8(b)].

(2) Crossings of Class III watercourses ~~which~~ that are dry at the time of ~~timber operations~~ use.

~~**(3)** At existing road crossings.~~

~~**(4)**~~**(3)** At new tractor ~~and~~ road crossings approved as part of the Fish and Game Code process (F&GC 1600 et seq.).

~~Use of existing roads is addressed in 916.4(a) [936.4(a), 956.4(a)].~~

Amend 916.4 [936.4, 956.4]. Watercourse and Lake Protection.

(a) The RPF or supervised designee shall conduct a field examination ~~of~~ and map all lakes and Class I, II, III, and IV watercourses ~~and shall map all lakes and watercourses which contain or conduct Class I, II, III or IV waters~~.

(1) As part of this field examination, the RPF or

supervised designee shall evaluate areas near, and areas with the potential to directly impact, watercourses and lakes for sensitive conditions including, but not limited to, existing and proposed roads, skidtrails and landings, unstable and erodible watercourse banks, unstable upslope areas, debris, jam potential, inadequate flow capacity, ~~changeable~~ migrating channels, overflow channels, flood prone areas, and riparian zones wherein the values set forth in 14 CCR §§ 916.4~~(b)~~ [936.4~~(b)~~, 956.4~~(b)~~], subsection(b) are impaired. *****

Amend § 916.9 [936.9, 956.9]. Protection and Restoration of the Beneficial Functions of the Riparian Zone in Watersheds with Listed Anadromous Salmonids.

In addition to all other district Forest Practice Rules, the following requirements shall apply in any watershed with listed anadromous salmonids. Requirements of 14 CCR § 916.9 [936.9, 956.9] precede other sections of the FPRs.

Geographic scope - Requirements for watersheds with listed anadromous salmonids differ depending on the geographic location of the watershed and geomorphic characteristics of the watercourse. Unique requirements for watersheds with listed anadromous salmonids are set forth for 1) watercourses in the coastal anadromy zone with confined channels, 2) watercourses with flood prone areas or channel migration zones, and 3) watercourses with confined channels located outside the coastal anadromy zone.

Watersheds which do not meet the definition of “watersheds with listed anadromous salmonids” are not subject to this section except as

follows: The provisions of 14 CCR 916.9 [936.9, 956.9], subsections (k)-(q), ~~923.3 [943, 963] and 923.9 [943.9, 963.9]~~ also apply to planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids for purposes of reducing significant adverse impacts from transported fine sediment. Projects in other watersheds further upstream that flow into watersheds with listed anadromous salmonids, not otherwise designated above, may be subject to these provisions based on an assessment consistent with cumulative impacts assessment requirements in 14 CCR §§ 898 and 912.9 [932.9, 952.9] and Technical Rule Addendum No. 2, Cumulative Impacts Assessment. These requirements do not apply to upstream watersheds where permanent dams attenuate the transport of fine sediment to downstream watercourses with listed anadromous salmonids.*****

*****(f) Class I watercourses -**

(1) For Class I watercourses, where fish are always or seasonally present or where fish habitat is restorable, any plan involving timber operations within the WLPZ shall contain the following information:

(A) Clear and enforceable specifications of timber operations within the Class I WLPZ, including a description of how any disturbance, or log or tree cutting and removal shall be carried out to conform with 14 CCR §§ 916.2 [936.2, 956.2], subsection (a) and 916.9 [936.9, 956.9], subsection (a).

~~**(B)** A description of all existing permanent logging road watercourse crossings.~~

~~**(C)** Clear and enforceable specifications describing how these crossings are to be modified, used, and treated to minimize~~

~~risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages.~~

~~**(D)** Clear and enforceable specifications for construction and operation of any new crossing(s) of a Class I watercourse to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage, or other potential impairment of beneficial uses of water~~

(~~E~~B) Documentation of how proposed harvesting in the WLPZ contributes to the objectives of each zone stated in 14 CCR § 916.9 [936.9, 956.9], subsection (c) and other goals in 14 CCR § 916.9 [936.9, 956.9], subsection (a) (1)-(8). Documentation shall include the examinations, analysis, and other requirements listed in 14 CCR § 916.4 [936.4, 956.4], subsection (a).*****

***** **(3) Class I watercourses with flood prone areas or channel migration zones:**

***** **(E) Preferred Management Practices in the Inner Zone A and B of Flood Prone Areas**

- ~~**4. Avoid Road and Landing Use:** All new roads and landings shall be located outside of zone. When feasible, minimize use of existing roads and landings in the flood prone area. No servicing of equipment within the flood prone area. Exceptions include the use of roads and landings to accomplish actions to improved salmonid habitat conditions stated 14 CCR § 916.9 [936.9, 956.9]. subsection (f)(3)(E(1.) above.~~

~~5.~~4. **Avoid Slash concentration and site preparation:******* or pile burning.

~~6.~~5. **Delineate Zone on the Ground:******* Locations of all WLPZ zones and CMZs shall be designated on the ground.

~~7.~~6. **Avoid Use of Water Drafting Sites:******* or stream alteration permits.

~~8.~~7. **Avoid Disturbance to Critical Flood Prone Area Habitat::******* and down large woody debris.

(F) Outer Zone:*****

*******(k) Year-round ~~logging road, landing and~~ tractor road use limitations.**

(1) ~~Logging roads, landings or~~ Ttractor roads shall not be used when operations may result in significant sediment discharge ~~visibly turbid water from the road, landing or tractor road (skid trail) or an inside ditch associated with the logging road, landing or tractor road may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or violate Water Quality Requirements.~~

~~**(2)** Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface in conformance with (1) above.~~

~~**(3)** Concurrent with use for log hauling, approaches to logging road watercourse crossings shall be treated for erosion control as needed to minimize soil erosion and sediment transport and to prevent the discharge of sediment into watercourses and lakes in quantities deleterious to the beneficial uses of water.~~

~~**(4)** Concurrent with use for log hauling, all traveled surfaces~~

~~of logging roads in a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection shall be treated for erosion control as needed to minimize soil erosion and sediment transport and to prevent the discharge of sediment into watercourses and lakes in quantities deleterious to the beneficial uses of water.~~

~~**5)** Grading to obtain a drier running surface more than one time before reincorporation of any resulting berms back into the road surface is prohibited.~~

(l) Extended Wet Weather Period - ~~October 15 to May 1 shall be considered the extended wet weather period and the~~The ~~following shall apply during the extended wet weather period:~~

~~**(1)**~~ No timber operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7 [934.7, 954.7], subsection (~~a~~b). ~~that specifically addresses, where applicable, proposed~~ logging road, landing or ~~tractor road construction, reconstruction and use~~ during the extended wet weather period~~.~~ ~~Where logging road watercourse crossing construction or reconstruction is proposed an implementation schedule shall be specified.~~

(~~2~~1**)** Unless the winter period operating plan proposes operations during an extended wet weather period with low antecedent soil wetness, no tractor roads shall be constructed, reconstructed, or used on slopes that are over 40 percent and within 200 feet of a Class I, II, or III watercourse, as measured from the watercourse or lake transition line ~~during the extended wet weather period~~.

~~**(3)** Logging roads, landings and tractor roads shall not be used when sediment from the logging road, landing or tractor road surface is transported to a watercourse or a drainage facility that discharges into a watercourse in amounts sufficient to cause a visible increase in turbidity in Class I, II, III, or IV waters.~~

~~**(4)** Logging roads and landings shall not be used for log hauling when saturated soil conditions result in the visible increase in turbidity specified in (3) above.~~*****

***** **(n) Treatments to stabilize soils -** Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent significant sediment discharge ~~the discharge of sediment into watercourses or lakes in amounts deleterious to aquatic species or the quality and beneficial uses of water, or that threaten to violate applicable water quality requirements~~, shall be described in the plan as follows.

(1)*****

~~*****(C) Disturbed tractor road cut banks and fills, and*****~~

(~~D~~C) Any other area of disturbed soil that threatens to discharge sediment into waters in amounts deleterious to the quality and beneficial uses of water.

*****(2)** Soil stabilization treatment measures may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, ~~rip-rapping~~, ~~grass~~ seeding, installing commercial erosion

control devices to manufacturer's specifications, or chemical soil stabilizers.

(3)***

***** **(o)** ~~Section reserved for future use.~~ ~~**Erosion site identification and remedies.**~~ *****

***** **(p)** Section reserved for future use. ~~**Erosion control maintenance period.** The erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned in accordance with 14 CCR § 923.8 [943.8, 963.8] shall be three years.~~

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***** **(r)** Section reserved for future use. ~~**Water drafting.** Water drafting for timber operations shall:~~

~~**(1)** Comply with Fish and Game Code Section 1600, et seq.~~

~~**(A)** Timber operations conducted under a Fish and Game Code Section 1600 master or long-term agreement that includes water drafting may provide proof of such coverage for compliance with this paragraph.~~

~~**(2)** Describe the water drafting site conditions and proposed water drafting activity in the plan, including:~~

~~**(A)** a general description of the conditions and proposed water drafting;~~

~~**(B)** a map showing proposed water drafting locations;~~

~~**(C)** the watercourse classification;~~

~~**(D)** the drafting parameters including the months the site is proposed for use; estimated total volume needed per day; estimated maximum instantaneous drafting rate and filling time; and disclosure~~

~~of other water drafting activities in the same watershed;~~

~~**(E)** the estimated drainage area (acres) above the point of diversion;~~

~~**(F)** the estimated unimpeded streamflow, pumping rate, and drafting duration,~~

~~**(G)** a discussion of the effects on aquatic habitat downstream from the drafting site(s) of single pumping operations, or multiple pumping operations at the same location, and at other locations in the same watershed;~~

~~**(H)** a discussion of proposed alternatives and measures to prevent adverse effects to fish and wildlife resources, such as reducing hose diameter; using gravity-fed tanks instead of truck pumping; reducing the instantaneous or daily intake at one location; describing allowances for recharge time; using other dust palliatives; and drafting water at alternative sites; and~~

~~**(I)** The methods that will be used to measure source streamflow prior to the water drafting operation and the conditions that will trigger streamflow to be measured during the operation.~~

~~**(3)** All water drafting for timber operations are subject to each requirement below unless the Department of Fish and Game modifies the requirement in the Lake or Streambed Alteration agreement that authorized the drafting operation, or unless otherwise specified below:~~

~~**(A)** All intakes shall be screened to prevent impingement of juvenile fish against the screen. The following requirements apply to screens and water drafting on Class I waters:~~

~~**1.** Openings in perforated plate or woven wire mesh screens shall not exceed 3/32 inches (2.38 millimeters). Slot openings in wedge wire screens shall not exceed 1/16 inches (1.75 millimeters).~~

~~**2.** The screen surface shall have at least 2.5 square feet of openings submerged in water.~~

~~**3.** The drafting operator shall regularly inspect, clean, and maintain screens to ensure proper operation whenever water is drafted.~~

~~**4.** The approach velocity (water moving through the screen) shall not exceed 0.33 feet/second.~~

~~**5.** The diversion rate shall not exceed 350 gallons per minute.~~

~~**(B)** Approaches and associated drainage features to drafting locations within a WLPZ or channel zone shall be surfaced with rock or other suitable material to minimize generation of sediment.~~

~~**(C)** Barriers to sediment transport, such as straw waddles, logs, straw bales or sediment fences, shall be installed outside the normal high water mark to prevent sediment delivery to the watercourse and limit truck encroachment.~~

~~**(D)** Water drafting trucks parked on streambeds and floodplains shall use drip pans or other devices such as absorbent blankets, sheet barriers or other materials as needed to prevent soil and water contamination from motor oil or hydraulic fluid leaks.~~

~~**(E)** Bypass flows for Class I watercourses shall be provided in volume sufficient to avoid dewatering the watercourse and maintain aquatic life downstream, and shall conform to the following standard:~~

~~**1.** Bypass flows in the source stream during drafting shall be at least 2 cubic feet per second.~~

~~**2.** Diversion rate shall not exceed 10 percent of the surface flow.~~

~~**3.** Pool volume reduction shall not exceed 10 percent.~~

~~**(F)** The drafting operator shall keep a log that records for each time water is drafted, the date, total pumping time, pump rate, starting time, ending time, and volume diverted. Logs shall be filed with the Department of Forestry and Fire Protection at the end of seasonal operations and maintained with the plan record. This requirement may be modified in the approved plan that covers the water drafting, but only with concurrence from the Department of Fish and Game.~~

~~**(G)** Before commencing any water drafting operation, the RPF and the drafting operator shall conduct a pre-operations field review to discuss the water drafting measures in the plan and/or Lake or Streambed Alteration Agreement.~~*****

*******(v) Site-specific measures or nonstandard operational provisions*******

Amend § **918.3 [938.3, 958.3]. ~~Roads to be Kept Passable~~**

~~Timber operators shall keep all logging truck roads in a passable condition during the dry season for fire truck travel until snag and slash disposal has been completed.~~

Amend Article 12. [Article 11. Northern] Logging Roads, Landings, and Logging Road Watercourse Crossings. ~~**Logging Roads and Landings**~~

Amend § **923 [943,963]. Intent for Logging Roads, Landings, and Logging Road Watercourse Crossings** ~~**Logging Roads and Landings**~~**.**

(a) All logging roads, landings, and logging road watercourse crossings in the logging area shall be planned, constructed, reconstructed, used, maintained, removed, abandoned, and deactivated in a manner that:

(1) Is consistent with long-term enhancement and maintenance of the forest resource.

(2) Accommodates appropriate yarding systems.

(3) Is economically feasible.

(b) Such planning, construction, reconstruction, use, maintenance, removal, abandonment, and deactivation shall occur in a manner that ~~minimizes potential~~avoids or substantially lessens significant adverse impacts to, among other things:

(1) Public safety. **STAFF NOTE: INCLUSION OF "PUBLIC SAFETY" ON THIS LIST MAY BE REEXAMINED. PUBLIC SAFETY WAS RECENTLY INCLUDED AS A REASON FOR PLAN DISAPPROVAL IN § 898.2(i).**

~~**(2)** Listed species of fish and wildlife.~~

(~~**3**~~**2)** Fish and wildlife habitat and listed species of fish and

wildlife.

(~~4~~3) Water quality and the beneficial uses of water.

(~~5~~4) Soil resources.

(~~6~~5) Significant archeological and historical sites.

(~~7~~6) Air quality.

(~~8~~7) Visual resources.

~~**(9) Worker safety.**~~

(~~10~~8) Fire hazard.

(c) The RPF may propose exceptions to ~~these~~ the rules of this Article if explained and justified in the plan and found by the Director ~~to be in conformance with this article~~not to result in a significant adverse impact on the environment.

(d) Exceptions may also be provided through application of Fish and Game Code Sections 1600 et seq. and shall be made an enforceable part of the plan in accordance with 14 CCR §S 1039, 1040, 1090.14, 1092.26, or 1092.27, as appropriate.

(e) For watersheds with listed anadromous salmonids and for planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids all logging roads, landings, and logging road watercourse crossings shall be planned, designed, constructed and reconstructed, used, maintained , abandoned, deactivated, and removed in accordance with 14 CCR § 916.9 (a) and (c) [936.9 (a) and (c), 956.9 (a) and (c)].

(f) The provisions of Articles 12 [Article 11 for Northern District] that apply in watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any

watershed with listed anadromous salmonids shall not apply to a plan that is subject to:

(1) A valid incidental take permit issued by DFG pursuant to Section 2081(b) of the Fish and Game Code that addresses anadromous salmonid protection; or

(2) A federal incidental take statement or incidental take permit that addresses anadromous salmonid protection, for which a consistency determination has been made pursuant to Section 2080.1 of the Fish and Game Code; or

(3) A valid natural community conservation plan that addresses anadromous salmonid protection approved by DFG under section 2835 of the Fish and Game Code; or

(4) A valid Habitat Conservation Plan (HCP) that addresses anadromous salmonid protection, approved under Section 10 of the federal Endangered Species Act of 1973; or

(5) Project revisions, guidelines, or take avoidance measures pursuant to a memorandum of understanding or a planning agreement entered into between the plan submitter and DFG in preparation of obtaining a natural community conservation plan that addresses anadromous salmonid protection.

~~All logging roads and landings in the logging area shall be planned, located, constructed, reconstructed, used, and maintained in a manner which: is consistent with long-term enhancement and maintenance of the forest resource; best accommodates appropriate yarding systems, and economic feasibility; minimizes damage to soil resources and fish and wildlife habitat; and prevents degradation of the quality and~~

~~beneficial uses of water. The provisions of this article shall be applied in a manner which complies with this standard.~~

~~Factors that shall be considered when selecting feasible alternatives (see 14 CCR 897 and 898) shall include, but are not limited to, the following:~~

~~**(a)** Use of existing roads whenever feasible.~~

~~**(b)** Use of systematic road layout patterns to minimize total mileage.~~

~~**(c)** Planned to fit topography to minimize disturbance to the natural features of the site.~~

~~**(d)** Avoidance of routes near the bottoms of steep and narrow canyons, through marshes and wet meadows, on unstable areas, and near watercourses or near existing nesting sites of threatened or endangered bird species.~~

~~**(e)** Minimization of the number of watercourse crossings.~~

~~**(f)** Location of roads on natural benches, flatter slopes and areas of stable soils to minimize effects on watercourses.~~

~~**(g)** Use of logging systems which will reduce excavation or placement of fills on unstable areas.~~

Amend § 923.1[943.1, 963.1]. Planning for Logging Roads and Landings.

~~The following standards shall apply to logging roads and landings:~~

~~**(a)**~~ Logging roads and landings shall be planned and located within the context of a systematic layout pattern that considers 14 CCR § 923(b), uses existing logging roads and landings where feasible and appropriate, and provides access for fire and resource protection activities.~~, and minimizes the following:~~

(a) Logging roads and landings shall be planned and located to minimize the following:

(1) Duplicative roads and total road mileage.

(2) The number of logging road watercourse crossings.

(3) ~~Activities~~ Construction and reconstruction near watercourses, lakes, marshes, wet meadows, and other wet areas.

(4) ~~Activities~~ Construction and reconstruction across steep areas that lead without flattening to Class I, II, III, or IV watercourses and lakes.

(5) ~~Activities~~ Construction and reconstruction on unstable areas or in connected headwall swales.

(6) Construction and reconstruction~~Activities~~ near nesting sites of rare, threatened, or endangered bird species.

(7) Construction and reconstruction~~Activities~~ near ~~significant~~ populations of rare, threatened, or endangered plants.

(8) Ground disturbance and the size of cuts and fills.

(9) The potential for affecting surface hydrology, including but not limited to, concentrating or diverting runoff or draining the logging road or landing surface directly into a watercourse or lake.

(10) Maintenance needs while being compatible with the logging road classification and long-term road usage.

~~**(b)** No logging roads or landings shall be planned for construction or reconstruction in Class I, II, III, or IV watercourses or lakes, within a WLPZ, or in marshes, wet meadows, and other wet areas, except as follows:~~

~~**(1)** At existing logging road watercourse crossings.~~

~~**(2)** At constructed or reconstructed logging road watercourse crossings to be constructed or reconstructed that are approved as part of the Fish and Game Code process (F&GC 1600 et seq.)~~

~~**(3)** At logging road watercourse crossings of Class III watercourses that are dry at the time of use.~~

(b) No logging roads or landings shall be planned for construction (i) within 150 feet of the Class I watercourse transition line, (ii) within 100 feet of the Class II watercourse transition line on slopes greater than 30%, (iii) within Class I, II, III, or IV watercourses or lakes, (iv) within a WLPZ, or (v) in marshes, wet meadows, and other wet areas, except as follows:

(1) At existing logging road watercourse crossings.

(2) At logging road watercourse crossings to be constructed or reconstructed that are approved as part of the Fish and Game Code process (F&GC 1600 et seq.)

(3) At logging road watercourse crossings of Class III watercourses that are dry at the time of use.

(c) No logging roads or landings shall be planned for reconstruction (i) within Class I, II, III, or IV watercourses or lakes, (ii) within a WLPZ, or (iii) in marshes, wet meadows, and other wet areas, except as follows:

(1) At existing logging road watercourse crossings.

(2) At logging road watercourse crossings to be constructed or reconstructed that are approved as part of the Fish and Game Code process (F&GC 1600 et seq.)

(3) At logging road watercourse crossings of Class III watercourses that are dry at the time of use.

(~~c~~d) Logging roads and landings shall be planned and located to avoid unstable areas and connected headwall swales. The Director may approve an exception if those areas are unavoidable and site-specific measures to minimize slope instability due to logging road or landing construction or reconstruction are described and justified in the plan.

(~~d~~e) As part of the planning and use of logging roads, landings, and watercourse crossings in the logging area, the RPF or supervised designee shall: ~~1) evaluate and document the potential of the road or landing to impact sensitive conditions and 2)~~ (i) locate and map significant existing and potential erosion sites~~,~~ and ~~3)~~(ii) specify ~~and schedule~~ feasible treatments to mitigate significant adverse impacts from the road or landing.

~~**(1)** During the field examination of classified watercourses and lakes required under 14 CCR § 916.4 [936.4, 956.4], the RPF or supervised designee shall evaluate watercourse areas near existing, constructed, and reconstructed logging roads and landings in the logging area for significant existing and potential adverse impacts from the road to the sensitive condition. Sensitive conditions include, but are not limited to, unstable and erodible watercourse banks, unstable upslope areas, channels with inadequate flow capacity, changeable channels, overflow channels, flood prone areas, debris jam potential, aggraded channels, and riparian zones wherein the values set forth in 14 CCR 916.4 [936.4, 956.4], subsection (b) are impaired.~~

~~(2)~~ The RPF ~~or supervised designee~~ shall evaluate all logging roads and landings in the logging area, including appurtenant roads, for evidence of significant existing and potential erosion sites.

(~~3~~2) ~~The RPF shall consider the sensitive conditions and significant existing and potential erosion sites identified by sections~~ For significant existing and potential erosion sites identified per 14 CCR § 923.1 [943.1, 963.1] subsection ~~s~~(d)(1)~~ and (2), and the measures needed to maintain and restore, to the extent feasible, the functions set forth in 14 CCR § 916.4 [936.4, 956.4], subsection~~

~~(b) when planning logging roads and landings. Key factors to consider as part of developing necessary measures include:~~ , the RPF shall consider the following key factors as part of developing necessary treatments:

(A) Type of road (permanent~~ all-season~~, seasonal, or temporary road), road location, expected log truck haul routes, and traffic use (e.g. volume and season) of each road segment during the life of the plan.

(B) Age of road and the history of sediment delivery from existing roads.

(C) Beneficial uses of the watercourse or lake and sensitive conditions potentially affected by the road including, ~~among other things~~but not limited to, watercourse classification and presence of listed anadromous salmonids.

(D) The hillslope grade, road grade of crossing approaches and the gradient of the stream channel.

(E) The erodibility of hillslope material exposed by the road.

(F) The length of hydrologic connectivity of a road segment, the physical properties of the connected segment and the presence or absence ~~and functionality of erosion resistant material adjacent to the connected segment~~of an effective sediment filter strip.

(G) Site-specific information regarding the condition of and location of all existing or potential sediment sources including, but not limited to: watercourse crossings, road approaches, ditch relief culverts, road surfaces, road cuts, road fills, inboard ditches, through-cuts, and landings.

(~~4~~3) ~~The RPF shall describe in the plan feasible protection measures and treatments for roads and landings that impact identified sensitive conditions.~~

~~**(5)** A~~ The RPF shall submit a list of the significant existing and potential erosion sites identified ~~in~~ per 14 CCR § 923.1 [943.1, 963.1], subsection (d)(1~~2~~) which have feasible treatments with the plan. This list ~~shall be submitted with the plan and shall require~~shall include the following information:

(A) A map showing the location(s) of significant existing and potential erosion site(s) with a unique identifier for each site.

(B) Brief description of present condition of the mapped significant existing or potential erosion site.

(C) Brief description of proposed treatments for the mapped significant existing or potential erosion site.

(D) Items (B) and (C) above can be provided in tabular form as part of the plan.

(~~6~~4) ~~Disclose~~ The RPF shall disclose and map the significant existing and potential erosion sites identified ~~in~~ per 14 CCR § 923.1 [943.1, 963.1], subsection (d)(~~2~~1), for which no feasible treatment measures exist.

(~~7~~5) Where feasible treatments for significant existing or potential erosion site are proposed, the RPF shall ~~submit a schedule that prioritizes~~describe in the plan a logical order of treatment. ~~Prioritization of treatments shall be given to sites with increasing erosion risks.~~

(~~e~~f) When selecting feasible alternatives (see 14 CCR §§ 897 and 898) during the planning phase of logging roads and landings, the RPF shall consider the location and planned use of logging roads and landings and whether such logging roads and landings will be abandoned or deactivated.

(~~f~~g) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, where logging road or landing construction or reconstruction is proposed, the plan shall identify:

(1) How the proposed operations will fit into the systematic layout pattern.

(2) What, if any, offsetting mitigation measures, including but not limited to, abandonment of logging roads and landings, are needed to minimize potential adverse impacts to watersheds from the road system.

(~~g~~h) In watersheds with listed anadromous salmonids no logging roads or landings shall be planned for construction or reconstruction in the CMZ or Core Zone of a Class I watercourse except those listed in 14 CCR § 916.9(e)(1)(A)-(E) [936.9(e)(1)(A)-(E), 956.9(e)(1)(A)-(E)] or pursuant to 14 CCR § 916.9(v) [936.9(v), 956.9(v)], or within 150 feet of a Class I watercourse transition line.

(~~h~~i) In watersheds with listed anadromous salmonids within the Inner Zone A and B of flood prone areas of Class I watercourses the following Preferred Management Practices should be considered for inclusion in the plan by the RPF and by the Director:

(1) Constructed and reconstructed logging roads and landings should not be planned for location within these zones.

(2) When feasible, planned use of existing logging roads and landings should be minimized in the flood prone area.

(3) Exceptions include the use of roads and landings to accomplish actions to improve salmonid habitat conditions stated in 14 CCR § 916.9(f)(3)(E)(1) [936.9(f)(3)(E)(1), 956.9(f)(3)(E)(1)].

~~The following standards for logging roads and landings shall be adhered to:~~

~~**(a)** All logging roads shall be located and classified on the THP map as permanent, seasonal, or temporary. Road failures on existing roads which will be reconstructed shall also be located on the THP map. In addition to the requirements of 14 CCR 1034(x), the probable location of those landings which require substantial excavation or which exceed one quarter acre in size, shall be shown on the THP map.~~

~~**(b)** New logging roads shall be planned in accordance with their classification and maintenance requirements.~~

~~**(c)** Logging roads and landings shall be planned and located, when feasible, to avoid unstable areas. The Director shall approve an exception if those areas are unavoidable, and site-specific measures to minimize slope instability due to construction are described and justified in the THP.~~

~~**(d)** Where roads and landings will be located across 100 feet or more of lineal distance on any slopes over 65% or on slopes over 50% which are within 100 ft. of the boundary of a WLPZ, measures to minimize movement of soil and the discharge of concentrated surface runoff shall be incorporated in the THP. The Director may waive inclusion of such measures where the RPF can show that slope depressions, drainage ways, and other natural retention and detention features are sufficient to control overland transport of eroded material. The Director may require end-hauling of material from areas within 100 ft. of the boundary of a WLPZ to a stable location if end hauling is feasible and is necessary to protect water quality. The Director shall require maintenance provisions in the THP for drainage structures and facilities provided that such maintenance is feasible and necessary to keep roadbeds and fills stable.~~

~~**(e)** New logging roads shall not exceed a grade of 15% except that pitches of up to 20% shall be allowed not to exceed 500 continuous feet (152.4 m). These percentages and distances may be exceeded only where it can be explained and justified in the THP that there is no other feasible access for harvesting of timber or where in the~~

~~Northern or Southern Districts use of a gradient in excess of 20% will serve to reduce soil disturbance.~~

~~**(f)** Roads and landings shall be planned so that an adequate number of drainage facilities and structures are installed to minimize erosion on roadbeds, landing surfaces, sidecast and fills.~~

~~**(g)** Unless exceptions are explained and justified in the THP, general planning requirements for roads shall include:~~

~~**(1)** Logging roads shall be planned to a single-lane width compatible with the largest type of equipment used in the harvesting operation with turnouts at reasonable intervals.~~

~~**(2)** Roads shall be planned to achieve as close a balance between cut volume and fill volume as is feasible.~~

~~**(3)** When roads must be planned so that they are insloped and ditched on the uphill side, drainage shall be provided by use of an adequate number of ditch drains.~~

~~**(h)** Road construction shall be planned to stay out of Watercourse and Lake Protection Zones. When it is a better alternative for protection of water quality or other forest resources, or when such roads are the only feasible access to timber, exceptions may be explained and justified in the THP and shall be agreed to by the Director if they meet the requirements of this subsection.~~

~~**(i) [Coast]** The location of all logging roads to be constructed shall be flagged or otherwise identified on the ground before submission of a THP or major amendment. Exceptions may be explained and justified in the THP and agreed to by the Director if flagging is unnecessary as a substantial aid to examining: (1) compatibility between road location~~

~~and yarding and silvicultural systems, or (2) possible significant adverse effects of road location on water quality, soil productivity, wildlife habitat, or other special features of the area.~~

~~**(i) [Northern, Southern]** All logging roads to be constructed shall be flagged or otherwise identified on the ground before submission of a THP or, substantial deviation, except for temporary roads less than 600 ft. in length that would meet the requirements for a minor deviation (see 14 CCR 1036, 1039, 1040) if they were submitted as such. Exceptions may be explained and justified in the THP and agreed to by the Director if flagging or other identification is unnecessary as a substantial aid to examining: (1) compatibility between road location and yarding and silvicultural systems or (2) possible significant adverse effects of road location on water quality, soil productivity, wildlife habitat, or other special features of the area.~~

~~**(j)** If logging roads will be used from the period of October 15 to May 1, hauling shall not occur when saturated soil conditions exist on the road that may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or that violate Water Quality Requirements.~~

Amend § 923.2 [943.2, 963.2]. Design and Location for Logging Roads and Landings ~~Road Construction~~.

Constructed and reconstructed logging roads and landings shall be designed and located in accordance with their proposed use, maintenance requirements, and the approved plan:

(a) All logging roads and landings shall:

(1) Avoid or mitigate potential impacts to public safety.

(2) Avoid unstable areas and connected headwall swales to the extent feasible and minimize activities that adversely affect them.

(3) Minimize the size of cuts and fills to the extent feasible.

(4) Be outsloped where feasible and drained with waterbreaks or rolling dips in conformance with other applicable Forest Practice Rules.

(5) Be hydrologically disconnected from watercourses and lakes to the extent feasible to minimize sediment delivery from road runoff to a watercourse, and reduce the potential for hydrologic changes that alter the magnitude and frequency of runoff delivery to a watercourse. Guidance on methods for hydrologic disconnection may be found in the Board's Technical Rule Addendum Number 5.

(6) Include adequate drainage structures and facilities necessary to avoid concentrating and diverting runoff, to minimize erosion of roadbeds, landing surfaces, drainage ditches, sidecast and fills, to minimize the potential for soil erosion and sediment transport, and to prevent significant sediment discharge. Guidance on methods for conformance with this rule section may be found in the Board's Technical Rule Addendum Number 5.

(7) Avoid crossing, or locations on, 100 feet or more of lineal distance over any slopes greater than 65 percent or within 100 feet of the boundary of a WLPZ on slopes greater than 50 percent that drain toward the zoned watercourse or lake. Where logging road or landing construction or reconstruction is ~~necessary~~ proposed in these areas, specific measures to minimize movement of soil and the discharge of

concentrated surface runoff shall be incorporated in the plan. The Director may waive inclusion of such measures where the RPF can show that slope depressions, drainage ways, and other natural retention and detention features are sufficient to control overland transport of eroded material.

(b) The Director may require removal of deposits of excess material if the deposits are in a position to adversely affect the beneficial uses of water ~~and if the removal of the material is feasible~~.

(c) Excess material excavated during logging road and landing construction shall not be transported to ~~disposal sites~~locations where it may result in significant sediment discharge.

(d) In addition to the requirements of subsection (a) above, all logging roads to be constructed ~~and~~ or to be reconstructed ~~logging roads~~ shall:

(1) Be no wider than a single-lane compatible with the largest type of equipment specified for use on the logging road, with adequate turnouts provided as required for safety, ~~unless~~except where ~~prohibited by~~wider road dimensions are required by existing contracts with ~~the U.S.D.A. Forest Service or other~~a federal agency.

(2) Avoid grades greater than 20% or grades greater than 15% that extend greater than 500 continuous feet. Exceptions may be approved where there is no other feasible access for harvesting of timber or where use of a gradient greater than 20% will serve to reduce soil disturbance.

(e) In addition to the requirements of subsection (a) above, all landings to be constructed ~~and~~ or to be reconstructed ~~landings~~ shall:

(1) Be consistent with the yarding and loading system to be used.

(2) Be no larger than one-half acre.

(3) Avoid construction on slopes greater than 40 percent where the landing will exceed one-quarter acre in size.

~~Logging roads shall be constructed or reconstructed in accordance with the following requirements or as proposed by the RPF, justified in the THP, and found by the Director to be in conformance with the requirements of this Article.~~

~~**(a)** Logging roads shall be constructed in accordance with the approved THP. If a change in designation of road classification is subsequently made, the change shall be reported in accordance with 14 CCR 1039 or 1040, as appropriate.~~

~~**(b)** Where a road section which is greater than 100 feet in length crosses slopes greater than 65%, placement of fill is prohibited and placement of sidecast shall be minimized to the degree feasible. The Director may approve an exception where site specific measures to minimize slope instability, soil erosion, and discharge of concentrated surface runoff are described and justified in the THP.~~

~~**(c)** On slopes greater than 50%, where the length of road section is greater than 100 ft., and the road is more than 15 ft. wide (as measured from the base of the cut slope to the outside of the berm or shoulder of the road) and the fill is more than 4 ft. in vertical height at the road shoulder for the entire 100 feet the road shall be constructed on a bench that is excavated at the proposed toe of the compacted fill and the fill shall be compacted. The Director may~~

~~approve exception to this requirement where on a site-specific basis if the RPF has described and justified an alternative practice that will provide equal protection to water quality and prevention of soil erosion.~~

~~**(d) [Coast]** Fills, including through fills across watercourses shall be constructed in a manner to minimize erosion of fill slopes using techniques such as insloping through-fill approaches, waterbars, berms, rock armoring of fill slopes, or other suitable methods.~~

~~**(d) [Northern, Southern]** Roads shall be constructed so no break in grade, other than that needed to drain the fill, shall occur on through fill; breaks in grade shall be above or below the through fill, as appropriate. Where conditions do not allow the grade to break as required, through fills must be adequately protected by additional drainage structures or facilities.~~

~~**(e)** Through fills shall be constructed in approximately one foot lifts.~~

~~**(f)** On slopes greater than 35 percent, the organic layer of the soil shall be substantially disturbed or removed prior to fill placement. The RPF may propose an exception in the THP and the Director may approve the exception where it is justified that the fill will be stabilized.~~

~~**(g)** Excess material from road construction and reconstruction shall be deposited and stabilized in a manner or in areas where downstream beneficial uses of water will not be adversely affected.~~

~~**(h)** Drainage structures and facilities shall be of sufficient size, number and location to carry runoff water off of roadbeds, landings~~

~~and fill slopes. Drainage structures or facilities shall be installed so as to minimize erosion, to ensure proper functioning, and to maintain or restore the natural drainage pattern. Permanent watercourse crossings and associated fills and approaches shall be constructed where feasible to prevent diversion of stream overflow down the road and to minimize fill erosion should the drainage structure become plugged.~~

~~**(i)** Where there is evidence that soil and other debris is likely to significantly reduce culvert capacity below design flow, oversize culverts, trash racks, or similar devices shall be installed in a manner that minimizes culvert blockage.~~

~~**(j)** Waste organic material, such as uprooted stumps, cull logs, accumulations of limbs and branches, and unmerchantable trees, shall not be buried in road fills. Wood debris or cull logs and chunks may be placed and stabilized at the toe of fills to restrain excavated soil from moving downslope.~~

~~**(k)** Logging roads shall be constructed without overhanging banks.~~

~~**(l)** Any tree over 12 inches (30.5 cm) d.b.h. with more than 25% of the root surface exposed by road construction, shall be felled concurrently with the timber operations.~~

~~**(m)** Sidecast or fill material extending more than 20 ft. (6.1 m) in slope distance from the outside edge of the roadbed which has access to a watercourse or lake which is protected by a WLPZ shall be seeded, planted, mulched, removed, or treated as specified in the THP, to adequately reduce soil erosion.~~

~~**(n)** All culverts at watercourse crossings in which water is flowing at the time of installation shall be installed with their necessary protective structures concurrently with the fill, construction and reconstruction of logging roads. Other permanent drainage structures shall be installed no later than October 15. For construction and reconstruction of roads after October 15, drainage structures shall be installed concurrently with the activity.~~

~~**(o)** Drainage structures and drainage facilities on logging roads shall not discharge on erodible fill or other erodible material unless suitable energy dissipators are used. Energy dissipators suitable for use with waterbreaks are described in 14 CCR 914.6(f) [934.6(f), 954.6(f)].~~

~~**(p)** Where roads do not have permanent and adequate drainage, the specifications of Section 914.6 [934.6, 954.6] shall be followed.~~

~~**(q)** Drainage facilities shall be in place and functional by October 15. An exception is that waterbreaks do not need to be constructed on roads in use after October 15 provided that all such waterbreaks are installed prior to the start of rain that generates overland flow.~~

~~**(r)** No road construction shall occur under saturated soil conditions that may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or that violate Water Quality Requirements, except that construction may occur on isolated wet~~ ~~spots arising from localized ground water such as springs, provided measures are taken to prevent material from significantly damaging water quality.~~

~~**(s)** Completed road construction shall be drained by outsloping, waterbreaks and/or cross-draining before October 15. If road construction takes place from October 15 to May 1, roads shall be adequately drained concurrent with construction operations.~~

~~**(t)** Roads to be used for log hauling during the winter period shall be, where necessary, surfaced with rock in depth and quantity sufficient to maintain a stable road surface that does not produce sediment in quantities that may cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or would violate Water Quality Requirements throughout the period of use. Exceptions may be proposed by the RPF, justified in the THP, and found by the Director to be in conformance with the requirements of this subsection.~~

~~**(u)** Slash and other debris from road construction shall not be bunched against residual trees which are required for silvicultural or wildlife purposes, nor shall it be placed in locations where it could be discharged into Class I or II watercourses.~~

~~**(v)** Road construction activities in the WLPZ, except for stream crossings or as specified in the THP, shall be prohibited.~~

Amend § 923.3 [943.3, 963.3]. Mapping and Identification for Logging Roads and Landings ~~Watercourse Crossings~~.

The following mapping and identification standards shall apply to logging roads and landings:

(a) For logging road- and landing-related mapping requirements refer to 14 CCR §§ 1034(x)(4)(A)-(B) and (5)(A)-(L), 1090.5(w)(4)-(6), 1090.5(hh), 1090.7(n)(4)-(6), and 1092.09(l)(5)(A)-(B) and (6)(A)-(L).

(b) For logging road- and landing-related disclosure and description requirements refer to 14 CCR §§ 1034(bb)

(c) The RPF shall identify in the field, for use by the LTO, all logging roads and landings to be constructed ~~and~~ or to be reconstructed ~~logging roads and landings~~:

(1) Across slopes greater than 65 percent for 100 lineal feet or more.

(2) Across slopes greater than 50 percent for 100 lineal feet or more within 100 feet of the boundary of a WLPZ that drains toward the zoned watercourse or lake.

(d) The location of all logging roads to be constructed or to be reconstructed shall be flagged or otherwise identified on the ground prior to the pre-harvest inspection. Exceptions may be explained and justified in the plan and agreed to by the Director if flagging is unnecessary as a substantial aid to examining: (1) compatibility between logging road location and yarding and silvicultural systems, or (2) possible significant adverse effects of logging road location on the factors listed under 14 CCR § 923(b) [943(b), 963(b)].

~~Watercourse crossing drainage structures on logging roads shall be planned, constructed, reconstructed, and maintained or removed, according to the following standards. Exceptions may be provided through application of Fish and Game Code Sections 1600 et seq. and shall be included in the THP.~~

~~**(a)** The location of all new permanent watercourse crossing drainage structures and temporary crossings located within the WLPZ shall be shown on the THP map. If the structure is a culvert intended for permanent use, the minimum diameter of the culvert shall be specified in the plan. Extra culverts beyond those shown in the THP map may be installed as necessary.~~

~~**(b)** The number of crossings shall be kept to a feasible minimum.~~

~~**(c)** Drainage structures on watercourses that support fish shall allow for unrestricted passage of all life stages of fish that may be present, and shall be fully described in the plan in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.~~

~~**(d)** When watercourse crossings, other drainage structures, and associated fills are removed, the following standards shall apply:~~

~~**(1)** Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel.~~

~~**(2)** The excavated material and any resulting cut bank shall be sloped back from the channel and stabilized to prevent slumping and to minimize soil erosion. Where needed, this material shall be stabilized by seeding, mulching, rock armoring, or other suitable treatment.~~

~~**(e)** All permanent watercourse crossings that are constructed or reconstructed shall accommodate the estimated 100-year flood flow, including debris and sediment loads.~~

~~**(f)** Watercourse crossings and associated fills and approaches shall be constructed or maintained to prevent diversion of stream overflow down the road and to minimize fill erosion should the drainage structure become obstructed. The RPF may propose an exception where explained in the THP and shown on the THP map and justified how the protection provided by the proposed practice is at least equal to the protection provided by the standard rule.~~

~~(g) All new permanent culverts on Class I watercourses, where fish are always or seasonally present or where fish habitat is restorable, shall be planned, designed and constructed to allow upstream and downstream passage of fish or listed aquatic species during any life stage and for the natural movement of bedload to form a continuous bed through the culvert and shall require an analysis and specifications demonstrating conformance with the intent of this section and subsection.~~

Amend § 923.4 [943.4, 963.4]. Construction and Reconstruction for Logging Roads and Landings ~~Road Maintenance~~.

Logging roads and landings shall be constructed or reconstructed in accordance with the approved plan and the following requirements. If a change in designation of logging road classification is made after the plan is approved, the change shall be reported in accordance with 14 CCR §§ 1039, 1040, 1090.14, 1092.26 or 1092.27, as appropriate.

(a) Be hydrologically disconnected from watercourses and lakes to the extent feasible to minimize sediment delivery from road runoff to a watercourse, and reduce the potential for hydrologic changes that

alter the magnitude and frequency of runoff delivery to a watercourse. Guidance on methods for hydrologic disconnection may be found in the Board's Technical Rule Addendum Number 5.

(~~a~~b) Logging roads and landings shall not be constructed or reconstructed where such operations pose a significant risk to public safety.

(c) No logging roads or landings shall be constructed (i) within 150 feet of the Class I watercourse transition line, (ii) within 100 feet of the Class II watercourse transition line on slopes greater than 30%, (iii) within Class I, II, III, or IV watercourses or lakes, (iv) within a WLPZ, or (v) in marshes, wet meadows, and other wet areas, except as follows:

(1) At existing logging road watercourse crossings.

(2) At logging road watercourse crossings to be constructed or reconstructed that are approved as part of the Fish and Game Code process (F&GC 1600 et seq.)

(3) At logging road watercourse crossings of Class III watercourses that are dry at the time of use.

(d) No logging roads or landings shall be reconstructed (i) within Class I, II, III, or IV watercourses or lakes, (ii) within a WLPZ, or (iii) in marshes, wet meadows, and other wet areas, except as follows:

(1) At existing logging road watercourse crossings.

(2) At logging road watercourse crossings to be constructed or reconstructed that are approved as part of the Fish and Game Code process (F&GC 1600 et seq.)

(3) At logging road watercourse crossings of Class III watercourses that are dry at the time of use. ~~**(b)** Logging roads or landings shall not be constructed or reconstructed in Class I, II, III, or IV watercourses or lakes, the WLPZ, marshes, wet meadows, or other wet areas, except for logging road watercourse crossings or as specified in the plan.~~

(~~c~~e) Logging roads and landings shall not be constructed or reconstructed across unstable areas or connected headwall swales except as specified in the Plan.

(~~d~~f) Logging roads and landings shall not be constructed with overhanging banks.

(~~e~~g) Any tree over 12 inches dbh with more than 25 percent of the root surface exposed by logging road or landing construction shall be felled concurrently with the timber operations.

(~~f~~h) On slopes greater than 40 percent, the organic layer of the soil shall be removed prior to fill placement.

(~~g~~i) Waste organic material, such as uprooted stumps, cull logs, accumulations of limbs and branches, and unmerchantable trees, shall not be buried in logging road or landing fills. Wood debris or cull logs and chunks may be placed and stabilized at the toe of fill to restrain excavated soil from moving downslope.

(~~h~~j) Slash and other debris from road construction shall not be bunched against residual trees, which are required for silvicultural or wildlife purposes, nor shall it be placed in locations where it could be discharged into Class I or II watercourses or lakes.

(~~i~~k) Where constructed fills will exceed three feet in vertical thickness, fill slopes shall be inclined no greater than 65 percent.

(~~j~~l) Logging roads or landings shall not be constructed or reconstructed under saturated soil conditions that may produce significant sediment discharge, except that construction may occur on isolated wet spots arising from localized ground water such as springs, provided measures are taken to prevent significant sediment discharge.

(~~k~~m) Construction or reconstruction of logging roads or landings shall not take place during the winter period unless the approved plan incorporates a complete winter period operating plan pursuant to 14 § CCR 914.7 [934.7, 954.7], subsection (a) that specifically addresses such logging road or landing construction or reconstruction.

(~~l~~n) On slopes greater than 50 percent for greater than 100 lineal feet, fills greater than four feet in vertical height at the outside shoulder of the logging road or landing shall be:

(1) Constructed on a bench that is excavated at the proposed toe of the fill and is wide enough to compact the first lift.

(2) Compacted in approximately one-foot lifts from the toe to the finished grade or retained by an engineered structure.

(~~m~~o) Logging roads and landings approved for construction or reconstruction across 100 feet or more of lineal distance on any slope greater than 65 percent or within 100 feet of the boundary of a WLPZ on slopes greater than 50 percent that drain toward the zoned watercourse or lake shall be constructed to the specific construction techniques or measures as described in the plan.

(~~np~~) Fills shall not be constructed on slopes greater than 65 percent.

(~~oq~~) On slopes greater than 65 percent, sidecast from logging road and landing construction shall be minimized to the degree feasible.

(~~pr~~) Excess material transported from logging road or landing construction or reconstruction shall be deposited and stabilized in a manner and in areas that avoid potential adverse impacts to:

(1) Public safety.

(2) Areas that could deliver significant sediment discharge.

(~~qs~~) Where conditions are encountered during logging road or landing construction or reconstruction that differ from what was anticipated during the preparation and review of the plan and that will result in a significant adverse impact on the environment or to public safety, the LTO shall inform the RPF or plan submitter of these unanticipated conditions in accordance with 14 CCR § 1035.3. If necessary, the responsible RPF or plan submitter shall submit to the Director a deviation to the plan describing the unanticipated conditions and proposing appropriate actions.

(~~rt~~) In watersheds with listed anadromous salmonids, no logging roads or landings shall be constructed or reconstructed within the CMZ or Core Zone of a Class I watercourse except for those listed in 14 CCR § 916.9([936.9, 956.9]subsections (e)(1)(A)-(F) or pursuant to 14 CCR **§** 916.9[936.9, 956.9], subsection (v).

(~~su~~) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, the following shall apply:

(1) On slopes greater than 50 percent that have access to a watercourse or lake:

(**A)** Specific provisions for the protection of salmonid habitat shall be identified and described for all logging road construction.

(B) Where cutbank stability is not an issue, logging roads may be constructed as a full-benched cut (no fill). Spoils not utilized in logging road construction shall be disposed of in stable areas with less than 30 percent slope outside of any WLPZ, EEZ, or ELZ designated for watercourse or lake protection. The Director, with concurrence from other responsible agencies, may waive inclusion of these measures where the RPF can show that slope depressions and other natural retention and detention features are sufficient to control overland transport of eroded material.

(C) Logging roads may be constructed with balanced cuts and fills:

(i) If properly engineered, or,

(ii) If fills are removed and the slopes recontoured prior to the winter period.

(2) During the extended wet weather period, no timber operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7(b)[934.7(b), 954.7(b)]~~subsection (a)~~. The winter period operating plan ~~that~~ shall specifically address~~es~~, where applicable, proposed logging road ~~or~~ and landing construction, and reconstruction.

~~Logging roads, landings, and associated drainage structures used in a timber operation shall be maintained in a manner which minimizes concentration of runoff, soil erosion, and slope instability and which prevents degradation of the quality and beneficial uses of water during timber operations and throughout the prescribed maintenance period. In addition those roads which are used in connection with stocking activities shall be maintained throughout their use even if this is beyond the prescribed maintenance period.~~

~~**(a)** The prescribed maintenance period for erosion controls on permanent and seasonal roads and associated landings and drainage structures which are not abandoned in accordance with 14 CCR 923.8 [943.8, 963.8] shall be at least one year. The Director may prescribe a maintenance period extending up to three years in accordance with 14 CCR 1050.~~

~~**(b)** Upon completion of timber operations, temporary roads and associated landings shall be abandoned in accordance with 14 CCR 923.8 [943.8, 963.8].~~

~~**(c)** Waterbreaks shall be maintained as specified in 14 CCR 914.6 [934.6, 954.6].~~

~~**(d)** Unless partially blocked to create a temporary water source, watercourse crossing facilities and drainage structures, where feasible, shall be kept open to the unrestricted passage of water. Where needed, trash racks or similar devices shall be installed at culvert inlets in a manner which minimizes culvert blockage. Temporary blockages shall be removed by November 15.~~

~~**(e)** Before the beginning of the winter period, all roadside berms shall be removed from logging roads or breached, except where needed to facilitate erosion control.~~

~~**(f)** Drainage structures, if not adequate to carry water from the fifty-year flood level, shall be removed in accordance with 14 CCR 923.3(d) [943.3(d), 963.3(d)] by the first day of the winter period, before the flow of water exceeds their capacity if operations are conducted during the winter period, or by the end of timber operations whichever occurs first. Properly functioning drainage structures on roads that existed before timber operations need not be removed. An RPF may utilize an alternative practice, such as breaching of fill, if the practice is approved by the Director as providing greater or equal protection to water quality as removal of the drainage structure.~~

~~**(g)** Temporary roads shall be blocked or otherwise closed to normal vehicular traffic before the winter period.~~

~~**(h)** During timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of road surface materials by, but not limited to, rocking, watering, chemically treating, asphalting or oiling.~~

~~**(i)** Soil stabilization treatments on road or landing cuts, fills, or sidecast shall be installed or renewed, when such treatment could minimize surface erosion which threatens the beneficial uses of water.~~

~~**(j)** Drainage ditches shall be maintained to allow free flow of water and minimize soil erosion.~~

~~**(k)** Action shall be taken to prevent failures of cut, fill, or sidecast slopes from discharging materials into watercourses or lakes in quantities deleterious to the quality or beneficial uses of water.~~

~~**(l)** Each drainage structure and any appurtenant trash rack shall be maintained and repaired as needed to prevent blockage and to provide adequate carrying capacity. Where not present, new trash racks shall be installed if there is evidence that woody debris is likely to significantly reduce flow through a drainage structure.~~

~~**(m)** Inlet and outlet structures, additional drainage structures (including ditch drains), and other features to provide adequate capacity and to minimize erosion of road and landing fill and sidecast to minimize soil erosion and to minimize slope instability shall be repaired, replaced, or installed wherever such maintenance is needed to protect the quality and beneficial uses of water.~~

~~**(n)** Permanent watercourse crossings and associated approaches shall be maintained to prevent diversion of stream overflow down the road should the drainage structure become plugged. Corrective action shall be taken before the completion of timber operations or the drainage structure shall be removed in accordance with 14 CCR Section 923.3(d) [943.3(d), 963.3(d)].~~

~~**(o)** Except for emergencies and maintenance needed to protect water quality, use of heavy equipment for maintenance is prohibited during wet weather where roads or landings are within a WLPZ.~~

~~**(p)** The Director may approve an exception to a requirement set forth in subsections (b) through (o) above when such exceptions are explained and justified in the THP and the exception would provide for~~

~~the protection of the beneficial uses of water or control erosion to a standard at least equal to that which would result from the application of the standard rule.~~

Amend § 923.5 [943.5,963.5]. Erosion Control for Logging Roads and Landings ~~Landing Construction~~.

The following erosion control standards shall apply to logging roads and landings:

(a) All logging road and landing surfaces shall be adequately drained through the use of logging road and landing surface ~~geometry configurations~~shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible. Guidance on methods for hydrologic disconnection may be found in the Board's Technical Rule Addendum Number 5.

(b) Drainage facilities and structures shall be installed along all logging roads and all landings that are used for timber operations in sufficient number to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

(c) Ditch drains, associated necessary protective structures, and other features associated with the ditch drain shall:

(1) Be adequately sized~~, spaced, and of sufficient number~~ to ~~transmit~~ convey runoff.

(2) Minimize erosion of logging road and landing surfaces.

(3) Avoid discharge onto unprotected fill.

(4) Discharge to erosion resistant material.

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(5) Minimize potential adverse impacts to slope stability.

(d) Waterbreaks and rolling dips installed across logging roads and landings shall be of sufficient size and number and be located to avoid collecting and discharging concentrated runoff onto fills, erodible soils, unstable areas, and connected headwall swales.

(e) Where logging roads or landings do not have permanent and adequate drainage, and where waterbreaks are to be used to control surface runoff, the waterbreaks shall be cut diagonally a minimum of six inches into the firm roadbed and shall have a continuous firm embankment of at least six inches in height immediately adjacent to the lower edge of the waterbreak cut. On logging roads that have firmly compacted surfaces, waterbreaks may be installed by hand methods and need not provide the additional six-inch embankment provided the waterbreak ditch is constructed so that it is at least six inches deep and six inches wide on the bottom and provided there is ample evidence based on slope, material, amount of rainfall, and period of use that the waterbreaks so constructed will be effective in diverting water flow from the logging road surface without the embankment.

(f) Distances between waterbreaks shall not exceed the following standards and consider erosion hazard rating and road gradient:

MAXIMUM DISTANCE BETWEEN WATERBREAKS

Estimated Hazard Rating	**Logging Road Gradient in Percent**		
	10 or less	**11-25**	**>25**
	Feet	Feet	Feet

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Extreme	100	75	50
High	150	100	75
Moderate	200	150	100
Low	300	200	150)

(g) Where outsloping and rolling dips are used to control surface runoff, the dip in the logging road grade shall be sufficient to capture runoff from the logging road surface. The steepness of cross-slope gradient in conjunction with the logging road or landing gradient and the estimated soil erosion hazard rating shall be used to determine the rolling dip spacing in order to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

(h) Drainage facilities and structures ~~and ditch drains~~ shall discharge into vegetation, woody debris, or rock wherever possible. Where erosion-resistant material is not present, slash, rock, or other energy dissipating material shall be installed below the drainage facility or drainage structure outlet as necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

(i) Where logging road and landing surfaces, road approaches, inside ditches and drainage structures cannot be hydrologically disconnected, and where there is existing or the potential for significant sediment discharge, necessary and feasible treatments to prevent the discharge will be described in the plan.

(j) All logging roads and landings used for timber operations shall have adequate drainage upon completion of use for the year or by October 15, whichever is earlier. An exception is that drainage

facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow. ~~off of the logging road or landing surface.~~

(k) Where logging road or landing construction or reconstruction takes place during the extended wet weather period, drainage facilities and drainage structures shall be installed concurrent with construction or reconstruction operations.

(l) Bare soil on logging road or landing cuts, fills, transported spoils, or sidecast that is created or exposed by timber operations shall be stabilized to the extent necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge. Sites to be stabilized include, but are not limited to:

(1) Sidecast or fill exceeding 20 feet in slope distance from the outside edge of a logging road or a landing that has access to a watercourse or lake.

(2) Cut and fills associated with approaches to logging road watercourse crossings of Class I or II waters or Class III waters where an ELZ, EEZ, or a WLPZ is required.

(3) Bare areas exceeding 800 continuous square feet within a WLPZ.

(m) Soil stabilization measures shall be described in the plan pursuant to 14 CCR 923.5(~~k~~l)[943.5(l),963.5(l)], ~~subsection (k)~~ and may include, but are not limited to, removal, armoring with rip-rap,

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replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical stabilizers.

(n) Where the natural ability of ground cover within a WLPZ is inadequate to protect the beneficial uses of water by minimizing soil erosion or by filtering sediments, the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion.

(o) Soil stabilization treatments shall be in place upon completion of operations for the year of use or prior to the extended wet weather ~~operating~~ period, whichever comes first. An exception is that bare areas created during the extended wet weather ~~operating~~ period shall be treated prior to the start of rain that generates overland flow, or within 10 days, whichever is sooner, or as agreed to by the Director.

(p) Overhanging or unstable concentrations of slash, woody debris or soil along the downslope edge or face of landings shall be removed or stabilized when it is located on slopes greater than 65 percent ~~or~~, within 100 feet of the boundary of a WLPZ on slopes greater than 50 percent that drain toward the zoned watercourse or lake, or when it may result in significant sediment discharge. Removed materials shall not be placed at disposal sites that could result in a significant sediment discharge.

(q) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, the following shall apply:

(1) Constructed and reconstructed logging roads shall be outsloped where feasible and drained with waterbreaks or rolling dips.

~~where the road grade is inclined at seven (7) percent or less) in conformance with other applicable Forest Practice Rules. Outsloping may not be feasible in all situations due to safety concerns, timing of use, or expected traffic.~~

(2) In addition to the provisions listed under 14 CCR § 923.2(d)(2) [943.2(d)(2), 963.2(d)(2)], all permanent and seasonal logging roads with a grade of 15 percent or greater that extend 500 continuous feet or more shall have specific erosion control measures stated in the plan.

(3) Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent significant sediment discharge shall be described in the plan as follows:

(A) In addition to the requirements of subsections (~~k~~l)-(o), soil stabilization is required for the following areas:

(i) Areas exceeding 100 continuous square feet where timber operations have exposed bare soil, and

(ii) Disturbed logging road and landing cut banks and fills, and

(iii) Any other area of disturbed soil that threatens to cause significant sediment discharge.

(B) Where straw mulch is used, the minimum straw coverage shall be 90 percent, and any treated area that has been reused or has less than 90 percent surface cover shall be treated again by the end of timber operations.

(C) Where slash mulch is applied, the minimum slash contact with the ground surface shall be a minimum of 75 percent. ~~packed into the ground surface through the use of a tractor or equivalent piece of heavy equipment the minimum slash coverage in contact with the ground surface shall be 75 percent.~~

(D) For areas disturbed outside of the extended wet weather period, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could result in significant sediment discharge.

(E) For areas disturbed during the extended wet weather period, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days of disturbance, whichever is earlier.

(F) Where the natural ability of ground cover is inadequate to protect the beneficial uses of water by minimizing soil erosion or by filtering sediments within any ELZ or EEZ designated for watercourse or lake protection, the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion.

~~Landings shall be constructed according to the following standards:~~

~~**(a)** On slopes greater than 65%, no fill shall be placed and sidecast shall be minimized to the degree feasible. The Director may approve an exception if, site specific measures to minimize slope instability, soil erosion, and discharge of concentrated surface runoff are described and justified in the THP.~~

~~**(b)** On slopes greater than 50%, fills greater than 4 ft. in vertical height at the outside shoulder of the landing shall be: 1) constructed on a bench that is excavated at the proposed toe of the fill and is wide enough to compact the first lift, and 2) compacted in approximately 1 ft. lift from the toe to the finished grade. The RPF or supervised designee shall flag the location of this bench or the RPF shall provide a description of the bench location (narrative or drawing) in the THP for fills meeting the above criteria, where the length of landing section is greater than 100 feet. The RPF may propose an exception in the THP and the Director may approve the exception where it is justified that the landing will be stabilized.~~

~~**(c)** Waste organic material, such as uprooted stumps cull logs, accumulations of limbs and branches, or unmerchantable trees, shall not be buried in landing fills. Wood debris or cull logs and chunks may be placed and stabilized at the toe of landing fills to restrain excavated soil from moving downslope.~~

~~**(d)** Constructed landings shall be the minimum in width, size, and number consistent with the yarding and loading system to be used. Landings shall be no larger than one-half acre (.202 ha) unless explained and justified in the THP.~~

~~**(e)** No landing construction shall occur under saturated soil conditions that may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or that violate Water Quality Requirements.~~

~~**(f)** The following specifications shall be met upon completion of timber operations for the year or prior to October 15, whichever occurs first:~~

~~**(1)** Overhanging or unstable concentrations of slash, woody debris and soil along the downslope edge or face of the landings shall be removed or stabilized when they are located on slopes over 65% or on slopes over 50% within 100 ft. of a WLPZ.~~

~~**(2)** Any obstructed ditches and culverts shall be cleaned.~~

~~**(3)** Landings shall be sloped or ditched to prevent water from accumulating on the landings. Discharge points shall be located and designed to reduce erosion.~~

~~**(4)** Sidecast or fill material extending more than 20 feet in slope distance from the outside edge of the landing and which has access to a watercourse or lake shall be seeded, planted, mulched, removed or treated as specified in the THP to adequately reduce soil erosion.~~

~~**(5)** Sidecast or fill material extending across a watercourse shall be removed in accordance with standards for watercourse crossing removal set forth in 14 CCR 923.3 (d).~~

~~**(g)** On slopes greater than 35%, the organic layer of the soil shall substantially removed prior to fill placement.~~

~~**(h)** When landings are constructed after October 15 they shall be adequately drained concurrent with construction operations and shall meet the requirements of (f)(1) through (f)(4) of this subsection upon completion of operations at that landing.~~

~~**(i)** The RPF may propose and the Director may approve waiver of requirements in (f)(1) through (f)(4) of this subsection if the~~

~~Director finds they are not necessary to minimize erosion or prevent damage to downstream beneficial uses. The Director may also approve an exception to the October 15th date for treatment of slash and debris, including the practice of burning.~~

Amend § **923.6 [943.6, 963.6].** **Use of Logging Roads and Landings** ~~**Conduct of Operations on Roads and Landings**~~**.**

The following use standards shall apply to logging roads and landings:

(a) Logging roads and landings shall be used in a manner that is consistent with their design and construction specifications.

(b) Logging roads and landings shall not be used during any time of the year when operations may result in significant sediment discharge to watercourse or lakes, except in emergencies to protect the road, to reduce erosion, to protect water quality, or in response to public safety needs.

(c) During the extended wet weather period, Log hauling or other heavy equipment uses shall be limited to logging roads and landings ~~which are hydrologically disconnected from watercourses to the extent feasible and~~ that exhibit a stable operating surface in conformance with (b) above. Routine ~~U~~use of logging roads and landings ~~may occur on limited segments of roads or landings that do not exhibit a stable operating surface when the road segment or landing is completely, and at all times, hydrologically disconnected from a watercourse~~ shall not ~~take place~~ occur when ~~and~~ equipment cannot operate under its own power.

Comment [EH1]: Subsection (c) edited by FPC at April 8, 2013 meeting.

(d) When burning permits are required pursuant to PRC § 4423, logging roads and landings that are in use shall be kept in passable condition for fire trucks.

(e) ~~All roadside~~ Roadside berms that impede logging road drainage~~, create logging road surface flow,~~ or lead to hydrologic connection shall be removed or breached before the beginning of the winter period, with the exception of berms needed for erosion control.

(f) Temporary roads shall be blocked or otherwise closed to standard production four-wheel drive highway vehicles prior to the winter period.

(g) Logging roads and landings used for log hauling or other heavy equipment uses during the winter period shall occur on a stable operating surface and, where necessary, be surfaced with rock to a depth and quantity sufficient to maintain such a surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions. Exceptions may be proposed by the RPF, when locations are disclosed and justified in the THP, consistent with 14 CCR 923~~.6~~ (c), and approved by the Director.

(h) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, the following shall apply:

(1) Existing logging roads or landings shall not be used within the CMZ of a Class I watercourse except as listed in 14 CCR § 916.9 916.9 [936.9, 956.9] subsection (e)(1)(A)-(F) or pursuant to 14 CCR § 916.9(v) [936.9(v), 956.9(v)].

Comment [MD2]: Ended Here on March 5th.

(2) When feasible, minimize use of existing logging roads and landings located within Inner Zones A and B of flood prone areas. Exceptions include the use of roads and landings to accomplish actions to improve salmonid habitat conditions stated in 14 CCR § 916.9 916.9(f)(3)(E)(1.) [936.9(f)(3)(E)(1.), 956.9(f)(3)(E)(1.)]

(3) Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface in conformance with (b) above. Exceptions may be proposed by the RPF, when locations are disclosed and justified in the THP, consistent with 14 CCR 923 (c), and approved by the Director. ~~Concurrent with use for log hauling or other heavy equipment uses, all road approaches to logging road watercourse crossings shall be treated for erosion control as needed to minimize soil erosion and sediment transport and to prevent significant sediment discharge to watercourses or lakes.~~

(4) Concurrent with use for log hauling or other heavy equipment uses, all traveled surfaces of logging roads in a WLPZ, and ELZ or EEZ designated for watercourse or lake protection, shall be treated for erosion control as needed to minimize soil erosion and sediment transport and to prevent significant sediment discharge to watercourses or lakes.

(5) No timber operations shall take place during the extended wet weather period unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7(a) [934.7(a), 954.7(a)] that specifically addresses, where applicable, proposed logging road or landing use.

Comment [EH3]: FPC Edit - April 8, 2013: Staff directed to replace proposed language with existing rule language from section 916.9(k)(2).

~~Routine use and maintenance of roads and landings shall not take place when, due to general wet conditions, equipment cannot operate under its own power. Operations may take place when roads and landings are generally firm and easily passable or during hard frozen conditions. Isolated wet spots on these roads or landings shall be rocked or otherwise treated to permit passage. However, operations and maintenance shall not occur when sediment discharged from landings or roads will reach watercourses or lakes in amounts deleterious to the quality and beneficial uses of water. This section shall not be construed to prohibit activities undertaken to protect the road or to reduce erosion.~~

Amend § **923.7, 943.7, 963.7 Maintenance and Monitoring for Logging Roads and Landings** ~~**Licensed Timber Operator Responsibility for Roads and Landings**~~

The following maintenance and monitoring standards shall apply to logging roads and landings:

(a) Logging road and landing surfaces shall be monitored and maintained during timber operations and throughout the prescribed maintenance period to ensure hydrologic disconnection from watercourses and lakes to the extent feasible, minimize soil erosion and sediment transport, and to prevent significant sediment discharge.

(b) Logging roads that are used in connection with stocking activities shall be maintained throughout such use, even if this extends beyond the prescribed maintenance period.

(c) ~~Maintenance treatments to the running surfaces of logging roads and landing surfaces shall be described in the plan, if applicable,~~ During timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of road surface materials by ~~and may include~~, but not be limited to, rocking, watering, paving, chemically treating, or installing commercial erosion control devices to manufacturer's specifications.

(~~1~~d) ~~In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids grading~~ Grading of logging roads or landings to obtain a drier running surface more than one time before reincorporation of any resulting berms back into the road surface is prohibited.

(~~d~~e) Drainage facilities and drainage structures, including associated necessary protective structures, shall be maintained to allow free flow of water, and minimize soil erosion and slope instability. ~~or~~ ~~they~~ Drainage ~~F~~facilities and structures shall be repaired, replaced, or installed ~~when maintenance is~~ as needed to protect the quality and beneficial uses of water.

~~**(e)** Waterbreaks shall be maintained as specified in 14 CCR § 914.6 [934.6, 954.6] subsection (h).~~

(f) Soil stabilization treatments on logging road or landing cuts, fills, and sidecast shall be maintained as needed to reduce the potential for failures, ~~to~~ minimize soil erosion and sediment transport, and to prevent significant sediment discharge.

Comment [EH4]: FPC Edit – April 8, 2013: Staff directed to incorporate language of existing rule section 923.4(h).

Comment [EH5]: FPC Edit – April 8, 2013: Staff directed to make rule section applicable statewide and re-letter as item (d).

Comment [EH6]: FPC Edit – April 8, 2013: Staff directed to add reference to "slope instability" and word "Drainage."

Comment [EH7]: FPC Edit – April 8, 2013: Staff directed to completely delete item (e).

~~(g) Actions shall be taken as needed to reduce the potential for failures of cuts, fills, or sidecast that could result in significant sediment discharge.~~

(~~h~~g) Heavy equipment shall not be used in a WLPZ for maintenance during wet weather, except in emergencies to protect the road, to reduce erosion, to protect water quality, or in response to public safety needs.

(~~i~~h) Where there is evidence of ~~substantial soil erosion and~~ or significant sediment discharge ~~is present~~ along a logging road or landing used for timber operations, additional ~~drainage facilities and structures~~ measures shall be ~~installed as needed~~ implemented to minimize soil erosion and sediment transport, and to prevent significant sediment discharge.

(~~j~~i) The prescribed maintenance period for erosion controls on permanent and seasonal logging roads and associated landings and drainage structures, including private appurtenant, ~~which are not~~ abandoned, and ~~or~~ deactivated logging roads and landings~~in accordance with 14 CCR §§ 923.8 [943.8, 963.8] and 923.17 [943.17, 963.17]~~, shall be at least one year. The Director may prescribe a maintenance period extending up to three years in accordance with 14 CCR § 1050.

(~~1~~j) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, the ~~erosion control~~prescribed maintenance period for deactivated or abandoned roads shall be one year unless otherwise prescribed by the Director pursuant to 14 CCR § 1050. The prescribed maintenance period ~~on~~ for permanent and seasonal

Comment [EH8]: FPC Edit – April 8, 2013: Staff directed to revise language as indicated.

Comment [EH9]: FPC Edit – April 8, 2013: Staff directed to re-organize as subsection "(j)" and distinguish maintenance period as one year for abandoned and deactivated roads with Director exception.

logging roads and associated landings, including private appurtenant, ~~that are not~~ abandoned, ~~or~~ and ~~deactivated logging roads and landings in accordance with 14 CCR § 923.8 [943.8, 963.8]~~ shall be three years.

(~~k~~j) All Logging roads, including abandoned, deactivated, and private appurtenant roads, landings, and associated drainage structures used for timber operations shall be monitored as needed to comply with 14 CCR § 1050. Monitoring inspections shall be conducted, when access is feasible during the prescribed maintenance period, at least once annually and a sufficient number of times during the extended wet weather period, particularly after large winter storm events, to ensure that drainage facilities and structures are properly functioning as designed.

(1) Inspections shall include checking drainage facilities and structures for evidence of downcutting, plugging, overtopping, loss of function, and sediment delivery to Class I, II, or III watercourses and lakes. If evidence of sediment delivery or potential sediment delivery is present, and the implementation of feasible corrective measures could reduce the potential for significant sediment discharge, such additional measures shall be implemented when feasible.

(2) Inspections conducted pursuant to California Regional Water Quality Control Board requirements may be used to satisfy the inspection requirements of this section.

(~~l~~k) In watersheds with listed anadromous salmonids, water drafting for timber operations shall:

(1) Comply with Fish and Game Code Section 1600, et seq. Timber

operations conducted under a Fish and Game Code Section 1600 Master Agreement for Timber Operations that includes water drafting may provide proof of such coverage for compliance with 14 CCR 923.7(l).

(2) Describe the water drafting site conditions and proposed water drafting activity in the plan, including:

(A) A general description of the conditions and proposed water drafting;

(B) The watercourse classification;

(C) The drafting parameters including the months the site is proposed for use; estimated total volume needed per day; estimated maximum instantaneous drafting rate and filling time; and disclosure of other water drafting activities in the same watershed;

(D) The estimated drainage area (acres) above the point of diversion;

(E) The estimated unimpeded streamflow, pumping rate, and drafting duration,

(F) a discussion of the effects on aquatic habitat downstream from the drafting site(s) of single pumping operations, or multiple pumping operations at the same location, and at other locations in the same watershed;

(G) A discussion of proposed alternatives and measures to prevent adverse effects to fish and wildlife resources, such as reducing hose diameter; using gravity-fed tanks instead of truck pumping; reducing the instantaneous or daily intake at one location; describing allowances for recharge time; using other dust palliatives; and drafting water at alternative sites;

(H) The methods that will be used to measure source streamflow prior to the water drafting operation and the conditions that will trigger streamflow to be measured during the operation.

(3) All water drafting for timber operations are subject to each requirement below unless the Department of Fish and Game modifies the requirement in the Lake or Streambed Alteration agreement that authorized the drafting operation, or unless otherwise specified below:

(A) All intakes shall be screened to prevent impingement of juvenile fish against the screen. The following requirements apply to screens and water drafting on Class I waters:

(i) Openings in perforated plate or woven wire mesh screens shall not exceed 3/32 inches (2.38 millimeters). Slot openings in wedge wire screens shall not exceed 1/16 inches (1.75 millimeters).

(ii) The screen surface shall have at least 2.5 square feet of openings submerged in water.

(iii) The drafting operator shall regularly inspect, clean, and maintain screens to ensure proper operation whenever water is drafted.

(iv) The approach velocity (water moving through the screen) shall not exceed 0.33 feet/second.

(v) The diversion rate shall not exceed 350 gallons per minute.

(B) Approaches and associated drainage features to drafting locations within a WLPZ or channel zone shall be surfaced with rock or

other suitable material to minimize generation of sediment.

(C) Barriers to sediment transport, such as straw wattles, logs, straw bales or sediment fences, shall be installed outside the normal high water mark to prevent sediment delivery to the watercourse and limit truck encroachment.

(D) Water drafting trucks parked on streambeds, floodplains, or within a WLPZ shall use drip pans or other devices such as adsorbent or absorbent blankets, sheet barriers or other materials as needed to prevent soil and water contamination from motor oil or hydraulic fluid leaks.

(E) Bypass flows for Class I watercourses shall be provided in volume sufficient to avoid dewatering the watercourse and maintain aquatic life downstream, and shall conform to the following standard:

(i) Bypass flows in the source stream during drafting shall be at least 2 cubic feet per second.

(ii) Diversion rate shall not exceed 10 percent of the surface flow.

(iii) Pool volume reduction shall not exceed 10 percent.

(F) The drafting operator shall keep a log that records for each time water is drafted, the date, total pumping time, pump rate, starting time, ending time, and volume diverted. Logs shall be filed with the Department of Forestry and Fire Protection at the end of seasonal operations and maintained with the plan record. This requirement may be modified in the approved plan that covers the water drafting, but only with concurrence from the Department of Fish and

Game.

(G) Before commencing any water drafting operation, the RPF and the drafting operator shall conduct a pre-operations field review to discuss the water drafting measures in the plan and/or Lake or Streambed Alteration Agreement.

~~The licensed timber operator who is responsible for the implementation or execution of the plan shall not be responsible for the construction and maintenance of roads and landings, unless the licensed timber operator is employed for that purpose.~~

Amend § 923.8[943.8, 963.8]. ~~Planned~~ Abandonment and Deactivation of Logging Roads, ~~Watercourse Crossings,~~ and Landings.

All logging roads and landings that are proposed to be removed from the permanent road network~~, including historic roads and landings~~, shall be abandoned. All temporary logging roads and landings that are to remain a part of the permanent road network shall be deactivated prior to the winter period or upon completion of timber operations, whichever comes first. Other logging roads and landings proposed to be deactivated shall comply with the standards specified in this section. Where abandonment or deactivation is required or proposed, specific measures ~~used~~ to prevent significant sediment discharge and apply the following general requirements shall be described in the plan:

(a) All abandoned and deactivated logging roads and landings shall be left in a condition that provides for long-term, maintenance-free function of drainage and erosion controls.

Comment [EH10]: Refer to Comment L14-16-removal of confusing term: "historic." As modified, language is inclusive of all logging roads or landings proposed for removal.

Comment [EH11]: Incorporated prevention of "significant sediment discharge" to further qualify requirement for description of "specific measures."

(b) Soil exposed by abandonment or deactivation operations on cuts, fills, and sidecast shall be removed or stabilized ~~as needed during and upon completion of abandonment or deactivation operations~~ to minimize soil erosion and sediment transport ~~and to prevent significant sediment discharge~~.

~~**(c)** Logging road and landing surfaces shall be graded or shaped where needed to disperse runoff.~~

~~**(d)** Fills or sidecast shall be pulled or shaped where site conditions indicate that there is a reasonable potential for perched materials to enter a watercourse or lake and result in a significant sediment discharge.~~

(ec) Logging road watercourse crossings, other drainage structures, and associated fills shall be removed and stabilized in accordance with 14 CCR § 923.17 [943.17, 963.17]~~subsections (a)-(c)~~. ~~Where it is not feasible to remove drainage structures and associated fills, the plan shall identify how the potential for soil erosion and sediment transport will be minimized and how significant sediment discharge will be prevented.~~

(~~f~~d) Logging roads to be abandoned or deactivated shall be blocked prior to the winter period so that standard production four wheel-drive highway vehicles cannot pass the point of closure at the time of abandonment or deactivation. If the logging road is to be abandoned, then the blockage design shall be described in the plan.

~~Abandonment of roads, watercourse crossings and landings shall be planned and conducted in a manner which provides for permanent maintenance-free drainage, minimizes concentration of runoff, soil~~

Comment [EH12]: Attempted to edit subsections for improved coherency and reduced redundancy.

Comment [EH13]: Struck Subsections (c)&(d) because (a)&(b) are inclusive of road/landing drainage and fill/sidecast conditions warranting removal or stabilization.

Comment [EH14]: Section 923.17(e) already contains this requirement.

~~erosion and slope instability, prevents unnecessary damage to soil resources, promotes regeneration, and protects the quality and beneficial uses of water. General abandonment procedures shall be applied in a manner which satisfies this standard and include the following:~~

~~**(a)** Blockage of roads so that standard production four wheel-drive highway vehicles cannot pass the point of closure at the time of abandonment.~~

~~**(b)** Stabilization of exposed soil on cuts, fills, or sidecast where deleterious quantities of eroded surface soils may be transported in a watercourse.~~

~~**(c)** Grading or shaping of road and landing surfaces to provide dispersal of water flow.~~

~~**(d)** Pulling or shaping of fills or sidecast where necessary to prevent discharge of materials into watercourses due to failure of cuts, fills, or sidecast.~~

~~**(e)** Removal of watercourse crossings, other drainage structures, and associated fills in accordance with 14 CCR 923.3(d). Where it is not feasible to remove drainage structures and associated fills, the fill shall be excavated to provide an overflow channel which will minimize erosion of fill and prevent diversion of overflow along the road should the drainage structure become plugged.~~

~~The Director may approve an exception to a requirement set forth in (b) through (e) above when such exceptions are explained and justified in the THP and the exception would provide for the protection of the beneficial uses of water or control erosion to a standard at least~~

~~equal to that which would result from the application of the standard rule.~~

Amend § 923.9 [943.9, 963.9]. Licensed Timber Operator Responsibility for Logging Roads and Landings. ~~**Roads and Landings in Watersheds with Listed Anadromous Salmonids**~~

The licensed timber operator who is responsible for the implementation or execution of the plan shall be responsible for the construction and maintenance of logging roads and landings, unless another licensed timber operator is employed for that purpose and ~~amended into~~included in the plan as the responsible party.

~~In addition to all other district Forest Practice Rules, the following requirements shall apply in any planning watershed with listed anadromous salmonids:~~

~~**(a)** Where logging road or landing construction or reconstruction is proposed, the plan shall state the locations of, and specifications for, logging road or landing abandonment or other mitigation measures to minimize the adverse effects of long-term site occupancy of the transportation system within the watershed.~~

~~**(b)** Unless prohibited by existing contracts with the U.S.D.A. Forest Service or other federal agency, new and reconstructed logging roads shall be no wider than a single-lane compatible with the largest type of equipment specified for use on the road, with adequate turnouts provided as required for safety. The maximum width of these roads shall be specified in the plan. These roads shall be outsloped where feasible and drained with water breaks or rolling dips (where the road~~

Comment [EH15]: Refer to Comment L1-48 for purpose of edit.

~~grade is inclined at 7 percent or less), in conformance with other applicable Forest Practice Rules.~~

~~**(c)** The following shall apply on slopes greater than 50% that have access to a watercourse or lake:~~

~~**(1)** Specific provisions of construction shall be identified and described for all new roads.~~

~~**(2)** Where cutbank stability is not an issue, roads may be constructed as a full-benched cut (no fill). Spoils not utilized in road construction shall be disposed of in stable areas with less than 30 percent slope and outside of any WLPZ, EEZ, or ELZ designated for watercourse or lake protection. The Director, with concurrence from other responsible agencies, may waive inclusion of these measures where the RPF can show that slope depressions and other natural retention and detentions feature are sufficient to control overland transport of eroded material.~~

~~**(3)** Logging roads may be constructed with balanced cuts and fills: if~~

~~**(A)** Properly engineered, or~~

~~**(B)** Fills are removed and the slopes recontoured prior to the winter period.~~

~~**(d)** In addition to the provisions listed under 14 CCR § 923.1 [943.1, 963.1], subsection (e), all permanent or seasonal logging roads with a grade of 15% or greater that extend 500 continuous feet or more shall have specific erosion control measures stated in the plan.~~

~~**(e)** Where logging road networks are remote or are located where the landscape is unstable, where crossing fills over culverts are large, or where logging road watercourse crossing drainage structures and~~

~~erosion control features historically have a high failure rate, drainage structures and erosion control features shall be oversized, designed for low maintenance, reinforced, or removed before the completion of the timber operation. The method of analysis and the design for crossing protection shall be included in the plan.~~

~~**(f)** Except when expressly required by 14 CCR § 923.9 [943.9, 963.9], subsections (f)(1)-(5) below, the provisions of 14 CCR § 923.9 [943.9, 963.9] shall not apply to a plan that is subject to:~~

~~**(1)** a valid incidental take permit issued by DFG pursuant to Section 2081(b) of the Fish and Game Code that addresses anadromous salmonid protection; or~~

~~**(2)** a federal incidental take statement or incidental take permit that addresses anadromous salmonid protection, for which a consistency determination has been made pursuant to Section 2080.1 of the Fish and Game Code; or~~

~~**(3)** a valid natural community conservation plan that addresses anadromous salmonid protection approved by DFG under section 2835 of the Fish and Game Code; or~~

~~**(4)** a valid Habitat Conservation Plan that addresses anadromous salmonid protection, approved under Section 10 of the federal Endangered Species Act of 1973; or~~

~~**(5)** project revisions, guidelines, or take avoidance measures pursuant to a memorandum of understanding or a planning agreement entered into between the plan submitter and DFG in preparation of obtaining a natural community conservation plan that addresses anadromous salmonid protection.~~

Amend 923.9.1 [943.9.1]. ~~**Measures for Roads and Landings in Watersheds with Coho Salmon.**~~

~~In addition to all other district Forest Practice Rules, the regulations in 14 CCR §§ 923.3 [949.3] and 923.9 [943.9] as amended and effective on January 1, 2010 shall apply in any planning watershed with coho salmon.~~

Adopt § 923.10 [943.10, 963.10]. Planning for Logging Road Watercourse Crossings.

The following planning standards shall apply to logging road watercourse crossings:

(a) Logging road watercourse crossings shall be planned and located within the context of a systematic logging road layout pattern.

(b) Logging road watercourse crossings shall be planned in a manner that is consistent with their proposed use.

(c) The number of logging road watercourse crossings shall be kept to a feasible minimum.

(d) Existing logging road watercourse crossing locations shall be utilized where feasible and appropriate.

(e) Where logging road watercourse crossings are proposed to be constructed or reconstructed in areas where public safety may be affected, the potential public safety impacts shall be disclosed in the plan.

(f) The planning for and use of logging road watercourse crossings shall include the evaluation and documentation of ~~sensitive~~ conditions

Comment [EH16]: Language of this subsection is based upon existing rule section 916.4(a)(1). Partial edit to language in response to comments L1-49 and L9-50.

and significant existing and potential erosion sites consistent with 14 CCR § 923.1(d) [943.1(d), 963.1(d)].

(g) The RPF shall disclose in the plan how diversion potential of stream overflow at logging road watercourse crossings will be addressed ~~prevented~~.

(h) All new permanent constructed or reconstructed logging road watercourse crossing culverts installed on Class I watercourses~~,~~ where fish are always or seasonally present ~~or where fish habitat is restorable, and where fish can move upstream of the crossing location,~~ shall be planned to allow upstream and downstream passage of fish or listed aquatic species during any life stage, and for the natural movement of bedload to form a continuous bed through the culvert.

Adopt § 923.11, 943.11, 953.11 Logging Road Watercourse Crossing Design and Implementation

The following design and implementation standards shall apply to logging road watercourse crossings:

(a) All constructed and reconstructed logging road watercourse crossings shall be designed in accordance with the planned use of the associated logging road.

(b) All logging road watercourse crossings shall be designed to avoid or mitigate potential significant adverse impacts to public safety.

Comment [EH17]: This is new rule language. Edited partially in response to Comment L17-32. Staff is concerned that language does not clearly indicate intention for use of "fail-safe" approach.

Comment [EH18]: New rule language based upon existing rule section 916.9(f)(1). Section is intended to distinguish between domestic water supply Class I and fish-bearing Class I. Staff edits to remove reference to "restorable" and near-redundant reference to "upstream movement." Whether or not fish can currently move upstream should have no bearing on the design of a new crossing to accomplish that objective provided there is no natural barrier. Class I restoration is an ASP provision that should be discussed before inclusion as a statewide provision.

(c) All constructed and reconstructed permanent logging road watercourse crossing structures shall be designed to accommodate the estimated 100-year flood flow, including debris and sediment loads.

(d) All new and replacement culverts used for logging road watercourse crossings shall be designed to be installed at or slightly below the natural watercourse grade, in alignment with the watercourse channel and of the appropriate length.

(e) Where new culverts are proposed for permanent installation at a logging road watercourse crossing, the minimum diameter of the culvert and the method(s) used to determine the culvert diameter shall be specified in the plan.

(f) All necessary protective structures associated with logging road watercourse crossings shall be adequately sized to transmit runoff, minimize erosion of crossing fills, and prevent significant sediment discharge.

(g) Methods to mitigate or prevent diversion of stream overflow at logging road watercourse construction or stabilization of ford crossings shall be adequately sized to resist mobilization, with the range of required rock dimensions described in the plan.

(h) Drainage structures at locations on watercourses that support both upstream and downstream movement of fish shall allow for unrestricted passage of all life stages of fish that may be present, and shall be fully described in the plan in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.

(i) All new permanent constructed and reconstructed logging road watercourse crossing culverts installed within Class I watercourses, which meet the criteria for Class I waters where fish are always or seasonally present or where fish habitat is restorable, shall include the analysis and specifications that document conformance with 14 CCR § 923.10 [943.10, 963.10]subsection (h).

(j) Where logging road networks are remote or are located where the landscape is unstable, where crossing fills over culverts are large, or where logging road watercourse crossing drainage structures and erosion control features historically have a high failure rate, drainage structures and erosion control features shall be oversized, designed for low maintenance, reinforced, or removed before the completion of the timber operation.

(k) In watersheds with listed anadromous salmonids, for Class I watercourses, where fish are always or seasonally present or where fish habitat is restorable, any plan involving timber operations within the WLPZ shall contain the following information:

(1) A description of all existing permanent logging road watercourse crossings.

(2) Clear and enforceable specifications describing how these crossings are to be modified, used, and treated to minimize risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages and in conformance with the standards of subsection (j) above and 14 CCR § 923.10[943.10, 963.10]subsection (h).

(3) Clear and enforceable specifications for construction and operation of any new crossing(s) of a Class I watercourse to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage at all life stages, or other potential impairment of beneficial uses of water.

(l) In watersheds with listed anadromous salmonids, in addition to the requirements of 14 CCR § 923.11 [943.11, 963.11] subsection (k), the method of analysis and the design for crossing protection shall be included in the plan.

Adopt § 923.12[943.12, 963.12]. Logging Road Watercourse Crossing Mapping and Identification.

The following mapping and identification standards shall apply to logging road watercourse crossings:

(a) For logging road watercourse crossing-related mapping requirements refer to 14 CCR §§ 1034(x)(6)(A)-(C), 1090.5(w)(7), 1090.7(n)(7), and 1092.09(l)(7)(A)-(C).

(b) For logging road watercourse crossing-related disclosure and description requirements refer to 14 CCR §§ 1034(ii)(1)-(2) and (4), 1034(kk)(4)(A), 1034(ll) and 1034(mm).

(c) The location of all logging road watercourse crossings to be constructed or reconstructed shall be flagged or otherwise identified on the ground prior to the pre-harvest inspection, if necessary, or prior to logging road watercourse crossing construction or reconstruction. Exceptions may be explained and justified in the plan and agreed to by the Director if flagging is unnecessary as a

substantial aid to examining possible significant adverse effects of the crossing location on the factors listed under 14 CCR § 923 [943), 963]subsection (b).

Adopt § 923.13 [943.13, 963.13]. Logging Road Watercourse Crossing Construction and Reconstruction.

The following construction and reconstruction standards shall apply to logging road watercourse crossings:

(a) Where applicable, logging road watercourse crossing construction and reconstruction shall comply with the conditions of required DFG 1600 agreements.

(b) All constructed and reconstructed permanent logging road watercourse crossings shall accommodate the 100-year flood flow, including debris and sediment loads.

(c) All new and replacement culverts used for logging road watercourse crossings shall be installed at or slightly below the natural watercourse grade and in alignment with the watercourse channel. For Class I watercourses where fish are always or seasonally present or where fish habitat is restorable, and where fish can move upstream of the crossing location, new and replacement culverts shall be installed below grade and in alignment with the watercourse channel to allow upstream and downstream passage of fish or listed aquatic species during any life stage and natural movement of bedload to form a continuous bed through the culvert and shall be in conformance the design specified in 14 CCR § 923.11 [943.11,963.11] subsection (j) and

with conditions of required DFG 1600 agreements specified in subsection (a) above.

(d) Fills for constructed and reconstructed logging road watercourse crossings shall be thoroughly compacted in approximately one-foot lifts during installation. The face of crossing fills shall be no greater than 65 percent (1.5:1, horizontal to vertical).

(e) Logging road watercourse crossings shall not discharge water onto erodible fill or other erodible material without the installation of energy dissipators and other necessary protective structures.

(f) Where water is flowing at the time of logging road watercourse crossing construction or reconstruction, necessary protective structures shall be concurrently installed.

(g) Where a significant volume of sediment is stored upstream from a logging road watercourse crossing that is proposed to be reconstructed, the stored sediment shall be removed or stabilized, to the extent feasible, as described in the plan and in conformance with the conditions of required DFG 1600 agreements.

(h) Critical dips shall be incorporated into the construction or reconstruction of logging road watercourse crossings utilizing culverts, except where diversion of overflow is prevented by other methods stated in the plan.

(i) Logging road watercourse crossings shall not be constructed or reconstructed under saturated soil conditions or when such activities could result in significant sediment discharge.

(j) Where conditions are encountered during logging road watercourse crossing construction or reconstruction that differ from what was

anticipated during the preparation and review of the plan and that will result in a significant adverse impact on the environment or to public safety, the LTO shall notify the RPF or plan submitter of these unanticipated conditions in accordance with 14 CCR § 1035.3. If necessary, the responsible RPF or plan submitter shall submit to the Director a proposed deviation to the plan describing the unanticipated conditions and proposing appropriate actions.

(k) Logging road watercourse crossings shall be installed no later than October 15, except where logging road construction or reconstruction takes place from October 15 to November 15 or from April 1 to May 1 where logging road watercourse crossings shall be installed concurrent with the activity.

(l) Logging road watercourse crossings shall not be installed during the winter period, except as specified in an approved winter operating plan per 14 CCR § 914.7 [934.7, 954.7]subsection (a).

(m) In watersheds with listed anadromous salmonids, excavated material and cut banks resulting from construction or reconstruction which has access to a watercourse shall be sloped back from the channel to prevent slumping, to minimize soil erosion and where needed, stabilized per 14 CCR **§** 923.14 [943.14, 963.14]subsection (b).

(n) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, during the extended wet weather period no timber operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7 [934.7, 954.7], subsection (a). that specifically addresses,

where applicable, proposed logging road watercourse construction or reconstruction. Where logging road watercourse crossing construction or reconstruction is proposed an implementation schedule shall be specified.

Adopt § 923.14 [943.14, 963.14]. Logging Road Watercourse Crossing Erosion Control.

(a) The following drainage standards shall apply to logging road watercourse crossings:

(1) Adequate surface drainage at logging road watercourse crossings shall be provided through the use of surface geometry configurations in combination with the installation of drainage facilities, ditch drains, or other necessary protective structures to hydrologically disconnect the road from the crossing to the extent feasible.

(2) Drainage facilities and ditch drains shall be installed adjacent to logging road watercourse crossings, as needed, to hydrologically disconnect to the extent feasible the logging road approach from the crossing, to minimize soil erosion and sediment transport and to prevent significant sediment discharge during and upon completion of timber operations. See 14 CCR § 923.5 [943.5, 963.5], subsections (d)-(j)

(3) Drainage facilities installed adjacent to logging road watercourse crossings shall be located to avoid discharging concentrated runoff onto fills, erodible soils, unstable areas, and connected headwall swales.

(b) The following stabilization standards shall apply to logging road watercourse crossings:

(1) Bare soil on fills or sidecast associated with logging road watercourse crossings that are created or exposed by timber operations shall be stabilized to the extent necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge. Erosion control measures for the traveled surface of roads and landing surfaces are specified in 14 CCR §§ 923.5 [943.5, 963.5] and 923.7 [943.7, 963.7]. Sites to be stabilized include, but are not limited to, sidecast or fill greater than 20 feet in slope distance from the outside edge of the road surface at the logging road watercourse crossing.

(2) Soil stabilization measures shall be described in the plan and may include, but are not limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical stabilizers.

(3) Soil stabilization treatments shall be in place upon completion of operations for the year of use or prior to the extended wet weather period, whichever comes first. An exception is that bare areas created after the extended wet weather period shall be treated within 10 days or as agreed to by the Director.

(4) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, within the WLPZ and within any ELZ or EEZ designated for watercourse or lake protection,

treatments to stabilize soils, minimize soil erosion, and prevent significant sediment discharge, shall be described in the plan as follows:

(A) In addition to the requirements of subsections (b)(1)-(3), soil stabilization is required for the following:

(i) Areas exceeding 100 continuous square feet where timber operations have exposed bare soil.

(ii) Disturbed logging road watercourse crossing cut banks and fills, and

(iii) Any other area of disturbed soil that threatens to cause significant sediment discharge.

(B) Where straw mulch is used, the minimum straw coverage shall be 90 percent, and any treated area that has been reused or has less than 90 percent surface cover shall be treated again by the end of timber operations.

(C) Where slash mulch is packed into the ground surface through the use of a tractor or equivalent piece of heavy equipment the minimum slash coverage shall be 75 percent of the exposed surface area.

(D) For areas disturbed outside the extended wet weather period, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could result in significant sediment discharge.

(E) For areas disturbed during the extended wet weather period, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National

Weather Service or within 10 days of disturbance, whichever is earlier.

Adopt § 923.15 [943.15, 963.15]. Logging Road Watercourse Crossing Use.

Logging road watercourse crossings shall be used in a manner that is consistent with the design, construction, and maintenance of the logging road along which they have been constructed (Refer to 14 CCR §§ 923.2 [943.2, 963.2], 923.4 [943.4, 963.4], 923.6 [943.6, 963.6], and 923.7 [943.7, 963.7]).

Adopt § 923.16 [943.16, 963.16]. Logging Road Watercourse Crossing Maintenance and Monitoring.

The following maintenance and monitoring standards shall apply to logging road watercourse crossings:

(a) Logging road watercourse crossings shall be maintained as designed, constructed, and reconstructed during timber operations and throughout the prescribed maintenance period.

(b) Logging road watercourse crossings that are used in connection with stocking activities shall be maintained throughout such use, even if this extends beyond the prescribed maintenance period.

(c) Soil stabilization treatments on logging road watercourse crossing fills shall be maintained to prevent soil erosion and significant sediment discharge.

(d) The plan shall identify measures to be used to reduce sediment delivery from logging road watercourse crossings where evidence of erosion and significant sediment discharge is present.

(e) Logging road watercourse crossings used for timber operations shall be monitored, as needed, to comply with 14 CCR § 1050. Monitoring inspections shall be conducted, when access is feasible during the prescribed maintenance period, at least once annually and a sufficient number of times during the extended wet weather period, particularly after large winter storm events, to ensure that watercourse crossings are properly functioning as designed.

(1) Inspections shall include checking watercourse crossings for evidence of downcutting, plugging, overtopping, loss of function, and sediment delivery to Class I, II, or III watercourses and lakes. If evidence of sediment delivery or potential sediment delivery is present, and the implementation of feasible corrective measures could reduce the potential for significant sediment discharge, such additional measures shall be implemented when feasible.

(2) Inspections conducted pursuant to California Regional Water Quality Control Board requirements may be used to satisfy the inspection requirements of this section.

(f) Drainage structures and associated necessary protective structures shall be maintained, repaired, and replaced as needed to minimize crossing blockage and to provide for adequate capacity.

(g) In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, the erosion control maintenance

period on logging road watercourse crossings that are not abandoned or deactivated in accordance with 14 CCR § 923.8 [943.8, 963.8] shall be three years.

Adopt § 923.17[943.17, 963.17] Logging Road Watercourse Crossing Removal.

All logging road watercourse crossings that are proposed by the plan submitter to be removed, including temporary crossings and those along abandoned or deactivated logging roads, shall be removed as described in the plan and shall apply the following standards:

(a) Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation and that is wider than the average natural channel, as observed upstream and downstream of the logging road watercourse crossing to be removed.

(b) The excavated material and any resulting cut bank shall be no greater than 65 percent (1.5:1, horizontal to vertical) from the outside edge of the constructed channel to prevent slumping, to minimize soil erosion and sediment transport, and to prevent significant sediment discharge.

(c) Exposed soil associated with logging road watercourse crossing fill removal, including cut banks and excavated material, shall be stabilized during and upon completion of removal operations, as needed, or as otherwise specified in the rules. Soil stabilization measures may include, but are not limited to, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control

devices to manufacturer’s specifications, or other suitable treatment to prevent soil erosion and significant sediment discharge.

(d) Appropriate drainage facilities shall be installed along removed logging road watercourse crossing approaches at locations that minimize the concentration of surface runoff and soil erosion and to prevent significant sediment discharge.

(e) Where it is not feasible to remove a logging road watercourse crossing or its associated fill to the above standards, the plan shall identify how soil erosion and significant sediment discharge will be prevented.

(f) Where a significant volume of sediment is stored upstream from a logging road watercourse crossing that is proposed to be removed, the stored sediment shall be removed or stabilized, to the extent feasible, as described in the plan and in conformance with required DFG 1600 agreements.

(g) All logging road watercourse crossings proposed for removal shall be removed upon completion of use, prior to the winter period or as specified in the applicable DFG 1600 agreement, whichever is earlier, or as otherwise specified in the plan.

(h) Where the removal of an individual logging road watercourse crossing eliminates access to other temporary crossings, all such crossings shall be removed concurrently.

(i) If operations are conducted during the winter period, temporary logging road watercourse crossings shall be removed before the flow of water exceeds the capacity of the individual crossing.

Amend § 1034. Contents of Plan.

*******(x)** The information in subsections (1)-(4)(A), (5)(A)-(5)(K), if applicable, (6)(A)-(B), and (7)-(16) shall be clearly shown on a map that is based upon a U. S. Geological Survey topographic quadrangle map, or equivalent, published at a scale of 1:24,000 or larger ~~On titled USGS (if available) or equivalent topographic maps of a scale not less than 2" to the mile, the information in subsections (1-4), (8), (9), and (11-13) shall be clearly shown~~. The information in subsections (4)(B), (5)(A)-(5)(L), if applicable, and (6)(C) shall be clearly shown on a topographic map at a scale of 1/2 inch equals 1 mile (1:126,720) or larger. Additional maps, which may be topographic or planimetric, may be used to provide the information required in the other subsections, to ~~or~~ show specific details, and to improve map clarity. ~~The appurtenant roads referenced in subsection (4) may be shown on a map which may be planimetric with a scale as small as one-half inch equals one mile.~~ Color coding shall not be used. A legend shall be included indicating the meaning of the symbols used to depict operational features on maps. See the district rules for the appropriate minimum mapping acreages.

(1)-(3) [No change]

(4) ~~Location of public roads and those private roads to be used for timber operations within the plan area, and private roads appurtenant to the timber operations where such roads are under the ownership or control of the timber owner, timberland owner, timber operator, or submitter of the plan, and classification of all proposed and existing logging roads as permanent, seasonal, or temporary roads.~~

The following logging road- and landing-related features shall be shown on a map of the appropriate type and scale as described in subsection (x) above:

(A) Location of logging roads within the harvest area, including those located in watercourses, lakes, WLPZs, marshes, wet meadows, or other wet areas and those proposed for abandonment or deactivation.

(B) Location of logging roads under the ownership or control of the timber owner, timberland owner, timber operator, or plan submitter that will be used for log hauling and that are between the harvest area and the first public road to be used for log hauling. This shall include:

(i) Logging roads and landings located in watercourses, lakes, WLPZs, marshes, wet meadows, or other wet areas, other than at logging road watercourse crossings.

(ii) Logging roads and landings proposed for abandonment or deactivation.

(iii) Logging roads that provide access to rock pits and water drafting sites.

(5) ~~Probable location of proposed and existing landings in the watercourse and lake protection zone, and landings outside the zone that are greater than 1/4 acre in size or whose construction involves substantial excavation.~~ The following shall be mapped at the appropriate scale required under subsection (x), whichever is applicable, for all constructed and reconstructed logging roads and landings, unless otherwise described:

(A) Location of logging road grades greater than 15 percent for over 200 continuous feet or logging road grades exceeding 20 percent.

(B) Location of road failures on existing logging roads to be reconstructed.

(C) Location of logging roads across and landings on unstable areas or connected headwall swales.

(D) Location of logging roads or landings within Class I, II, III, or IV watercourses or lakes, WLPZs, marshes, wet meadows, or other wet areas other than at logging road watercourse crossings.

(E) Location of logging roads and landings with insloping, inside ditch drainage, or crowning in excess of 300 lineal feet that drains into a classified watercourse or lake.

(F) Location of landings that require substantial excavation and landings in excess of one-quarter acre in size.

(G) Location of new sites on slopes greater than 40 percent or on active unstable areas used for disposal of spoils generated during logging road or landing construction or reconstruction.

(H) Location of logging roads and landings across slopes greater than 65 percent for 100 lineal feet or more.

(I) Location of logging roads and landings across slopes greater than 50 percent for 100 lineal feet or more within 100 feet of the boundary of a WLPZ that drains toward the zoned watercourse or lake.

(J) The location of significant erosion sites on logging roads and landings.

(K) In watersheds with listed anadromous salmonids, location of proposed water drafting locations.

(L) Location of any other area(s) where non-standard practices on logging roads are proposed.

(6) The following logging road watercourse crossing-related features shall be shown on a map of the appropriate type and scale as described in subsection (x) above:

(A) Location of existing logging road watercourse crossings within the harvest area, including those crossings to be abandoned or deactivated. This requirement may be met by depicting the intersection of a logging road and a watercourse.

(B) Location of constructed and reconstructed logging road watercourse crossings within the harvest area, including those crossings to be abandoned or deactivated.

(C) Logging road watercourse crossings that are not within the harvest area but are under the ownership or control of the owner of the timberland where timber is proposed for harvest and are between the harvest area and the first public road to be used for log hauling that are:

(i) Constructed and reconstructed logging road watercourse crossings that will be used for log hauling.

(ii) Existing logging road watercourse crossings to be abandoned or deactivated.

~~**(6)** Road failures on existing roads to be reconstructed.~~

(7) Location of all tractor road watercourse crossings of classified watercourses except temporary crossings of Class III watercourses that are dry at the time of use ~~without flowing water during timber operations at that crossing~~.

(8) Location of erosion hazard rating areas, if more than one rating exists.

(9) Location of watercourses and lakes with Class I, II, III, or IV waters.

(10) Location of known unstable areas or slides.

(11) Location of understocked areas prior to timber operations, and other areas not normally bearing timber to at least a 20-acre minimum, or as specified in the district rules.

(12) Location of boundaries of timber-site classes needed for determination of stocking standards to be applied, down to at least a 20-acre minimum or as specified in the district rules.

(13) Location of main ridge tops on the logging area suitable for fire suppression efforts that will require the felling of snags.

(14) Location of Coastal Commission Special Treatment Areas or any special treatment area.

(15) Location for which heavy equipment use is proposed on unstable areas, or on areas for which tractor use is proposed beyond the limitations of the standard forest practice rules.

(16) Location of any in lieu use of heavy equipment and location of tractor roads ~~other than crossings~~ in ~~the~~ watercourses, lakes WLPZs, marshes, wet meadows, and other wet areas.

~~**(17)** Location of any new or reconstructed road segment(s) that exceed an average 15% grade for over 200 feet.~~

(aa)- **[No change]**

(bb) Winter period operating plan where appropriate that addresses proposed logging road or landing construction, reconstruction. (Refer to 14 CCR § 923.4(k) [943.4(k), 963.4(k)]).

(cc) Explanation and justification for use of watercourses, marshes, wet meadows, and other wet areas as ~~landings, roads, or skid trails~~ tractor roads.

(dd)-**(ee)** **[No change]**

~~**(ff)** Explanation and justification for landings that exceed the maximum size specified in the rules.~~

~~**(gg)**~~ **(ff)**Any other information required by the rules or the Act to be included in the plan. The district rules provide for exceptions and alternatives to standard requirements that require inclusion of information in the THP.

~~**(hh)** Where roads, watercourse crossings, and associated landings in the logging area will be abandoned, the methods for abandonment shall be described.~~

~~**(ii)** On a map complying with subsection 1034(x), the locations and classifications of roads, watercourse crossings, and landings to be abandoned shall be shown.~~

~~**(jj)**~~**(gg)** A general description of physical conditions at the plan site, including general soils and topography information, vegetation and stand conditions, and watershed and stream conditions.

(hh) In watersheds with listed anadromous salmonids, the following shall apply:

(1) For Class I watercourses, where fish are always or seasonally present or where fish habitat is restorable, and where fish can move upstream of the crossing location, any plan involving timber operations within the WLPZ shall contain the following information:

(A) Clear and enforceable specifications describing how these crossings are to be modified, used, and treated to minimize risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages and in conformance with the standards of 14 CCR § 923.10(h) [943.10(h), 963.10(h)] and 923.11(j) [943.11(j), 963.11(j)].

(B) Clear and enforceable specifications for construction and operation of any new crossing(s) of a Class I watercourse to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage at all life stages, or other potential impairment of beneficial uses of water. (Refer to 14 CCR § 923.11(k)(2)-(3) [943.11(k)(2)-(3), 963.11(k)(2)-(3)].)

(ii) The following shall be provided in the plan for all constructed and reconstructed logging road watercourse crossings:

(1) Describe all constructed or reconstructed logging road watercourse crossings within the harvest area, as needed.

(2) Disclose the potential public safety impacts where crossing construction or reconstruction may affect public safety. (Refer to 14 CCR § 923.10(e) [943.10(e), 963.10(e)]).

(3) Disclose how diversions at logging road watercourse crossings will be avoided, including proposed method(s). (Refer to 14 CCR §§ 923.10(g) [943.10(g), 963.10(g)] and 923.11(g) [943.11(g), 963.11(g)]).

(4) Include the analyses and specifications that demonstrate all permanent constructed and reconstructed logging road watercourse crossing structures installed within Class I watercourses, where fish are always or seasonally present or where fish habitat is restorable, will be designed as needed, to allow for upstream and downstream passage of fish or listed aquatic species during any life stage and for the natural movement of bedload. (Refer to 14 CCR § 923.11(i)-(j) [943.11(i)-(j), 963.11(i)-(j)].)

(5) Specify the minimum diameter of the culvert and the method(s) used to determine the culvert diameter where new culverts are proposed for permanent installation at a logging road watercourse crossing. (Refer to 14 CCR § 923.11(e) [943.11(e), 963.11(e)].)

(6) State the range of required rock dimensions for rock used in logging road watercourse crossings utilizing fords. (Refer to 14 CCR § 923.11(h) [943.11(h), 963.11(h)].)

(7) Identify protection measures needed to reduce sediment delivery where evidence of soil erosion and significant sediment discharge is present at a logging road watercourse crossing used for timber operations. (Refer to 14 CCR § 923.16(d) [943.16(d), 963.16(d)].)

(8) Identify how soil erosion and significant sediment discharge will be prevented where it is not feasible to remove a logging road

watercourse crossing or its associated fill to the standards contained in 14 CCR § 923.17 [943.17, 963.17]. (Refer to 14 CCR §§ 923.8(e) [943.8(e), 963.8(e)] and 923.17(e) [943.17(e), 963.17(e)].)

(9) Disclose and describe site conditions, and, to the extent feasible, specify measures to be taken to address potential sediment mobilization where a significant volume of sediment is stored upstream from a logging road watercourse crossing that is proposed to be removed. (Refer to 14 CCR §§ 923.13(g) [943.13(g), 963.13(g)] and 923.17(f) [943.17(f), 963.17(f)].)

(10) In watersheds with listed anadromous salmonids, state how existing permanent culverts used for logging road watercourse crossings on Class I watercourses, where fish are always or seasonally present or where fish habitat is restorable, and where fish can move upstream of the crossing location, shall be brought up to the standards of 14 CCR § 923.11(c) [943.11(c), 963.11(c)].

(11) In addition to the requirements of 14 CCR § 923.11(k) [943.11(k), 963.11(k)], include the method of analysis and the design for logging road watercourse crossing protection.

Amend 1051.1. Contents of Modified THP

A plan submitted under ~~section~~ 14 CCR § 1051 above shall contain all the provisions of 14 CCR § 1034 except the following: (o), (x)(6), (x)(7), (z), (cc), (dd), (ee), (ff), and (mm), and the RPF shall:

Amend 1090.5 Contents of NTMP

(w) On a USGS quadrangle or equivalent topographical map of a scale not less than 2" to the mile, the following information shall be clearly provided. Additional maps may be required to show specific details, and may be planimetric. Color coding shall not be used. A legend shall be included indicating the meaning of the symbols used to depict operational features on maps. See the district rules for the appropriate minimum mapping acreages.

(1)-(3) [No change]

(4) Location of public roads within the ~~plan~~ harvest area, and private roads appurtenant to the timber operations where such roads are under the ownership or control of the timberland owner and are contiguous with the ~~plan~~ harvest area, and classification of all proposed and existing logging roads as permanent, seasonal, or temporary roads.

(5)-14) [No change]

(x)-(ff) [No change]

~~**(gg)** Where logging roads, logging road watercourse crossings, and associated landings in the logging area will be abandoned or deactivated, the methods for abandonment or deactivation shall be described.~~

~~**(hh)**~~**(gg)** On a map complying with ~~subsection~~ 14 CCR § ~~1090.6(x)~~ 1090.5(w), the locations and classifications of logging roads, logging road watercourse crossings, and landings to be abandoned or deactivated shall be shown.

~~**(ii) [No change]**~~ **[Note: remaining lettering/numbering under §1090.5, beginning with item (hh), will require revision.]**

Amend 1090.7 Notice of Timber Operations Content

*******(n)** On a USGS quadrangle or equivalent map of a scale not less than 2" to the mile, the following information pertinent to the Notice of Operations shall be clearly provided. Additional maps may be required to show specific details, and may be planimetric. Color coding shall not be used. A legend shall be included indicating the meaning of the symbols used to depict operational features on maps. See the district rules for the appropriate minimum mapping acreages.

(1)-(3) [No change]

(4) Location of public roads within the Notice area, and private roads appurtenant to the timber operations where such roads are under the ownership or control of the timberland owner, and are contiguous with the Notice area, and classification of all proposed and existing logging roads as permanent, seasonal, or temporary roads.

(5)-(11) [No change]

Amend 1092.09 PTHP Contents

(a) – (k) No change

(l) On a ~~titled USGS quadrangle or equivalent topographic map of a scale not less than 2" to the mile~~ map that is based upon a U. S. Geological Survey topographic quadrangle map, or equivalent, published at a scale of 1:24,000 or larger, the information in subsections ~~(1-5)~~ (1)-(5)(A), (6)(A)-(6)(K), if applicable, (7)(A)-(B), and (7-11) shall be clearly shown. On a topographic map at a scale of 1/2 inch equals 1 mile (1:126,720) or larger, the information in subsections (5)(B), (6)(A)-(6)(K), if applicable, and (7)(C) shall be clearly shown.

Additional maps, which may be topographic or planimetric, may be used to provide the information required in other subsections or show specific details, and to improve map clarity. ~~The appurtenant roads referenced in subsection (5) may be shown on a map which may be planimetric with a scale as small as one-half inch equals one mile.~~ Color coding shall not be used. A legend shall be included indicating the meaning of the symbols used to depict operational features on maps. See the district rules for the appropriate minimum mapping acreage.

(1)-(4) [No change]

(5) ~~Location of public roads within the PTHP, and private roads appurtenant to the timber operations where such roads are under the ownership or control of the timber owner, timberland owner or timber operator, and classification of all proposed and existing logging roads as permanent, seasonal, or temporary roads.~~ The following logging road- and landing-related features shall be shown on a map of the appropriate type and scale as described in subsection (l) above:

(A) Location of all logging roads within the harvest area, including those located in watercourses, lakes, WLPZs, marshes, wet meadows, or other wet areas and those proposed for abandonment or deactivation.

(B) Location of all logging roads that will be used for log hauling under the ownership or control of the timber owner, timberland owner, timber operator, or plan submitter that are between the harvest area and the first public road to be used for log hauling. This shall include:

(i) Logging roads and landings located in watercourses, lakes, WLPZs, marshes, wet meadows, or other wet areas, other than at logging road watercourse crossings.

(ii) Logging roads and landings proposed for abandonment or deactivation.

(iii) Logging roads that provide access to rock pits and water drafting sites.

(6) The following shall be mapped at the appropriate scale required under subsection (l), whichever is applicable, for all constructed and reconstructed logging roads and landings, unless otherwise noted:

(A) Location of logging road grades greater than 15 percent for over 200 continuous feet or logging road grades greater than 20 percent.

(B) Location of road failures on existing roads to be reconstructed.

(C) Location of logging roads across or landings on unstable areas or connected headwall swales.

(D) Location of logging roads or landings within Class I, II, III, or IV watercourses or lakes, WLPZs, marshes, wet meadows, or other wet areas other than at logging road watercourse crossings.

(E) Location of logging road and landing insloping, inside ditch drainage, or crowning in excess of 300 lineal feet that drains to a classified watercourse or lake.

(F) Location of landings that require substantial excavation and landings in excess of one-quarter acre in size.

(G) Location of disposal sites on slopes greater than 40 percent or on active unstable areas for spoils generated during logging road or landing construction or reconstruction.

(H) Location of logging roads and landings across slopes greater than than 65 percent for 100 lineal feet or more.

(I) Location of logging roads and landings across slopes greater than 50 percent for 100 lineal feet or more within 100 feet of the boundary of a WLPZ that drains toward the zoned watercourse or lake.

(J) The location of active erosion sites on logging roads and landings that will be treated.

(K) In watersheds with listed anadromous salmonids, location of proposed water drafting locations.

(L) Location of any other area(s) where non-standard practices on logging roads are proposed.

(7)~~**(6)** Location of proposed and existing landings in the watercourse and lake protection zone, and landings outside the zone that are greater than 1/4 acre in size or whose construction involves substantial excavation.~~ The following logging road watercourse crossing-related items shall be shown on a map of the appropriate type and scale as described in subsection (l) above:

(A) Location of all existing logging road watercourse crossings within the harvest area, including those proposed for abandonment or deactivation. This requirement may be met by depicting the intersection of a logging road and a watercourse.

(B) Location of all constructed or reconstructed logging road watercourse crossings within the harvest area, including those proposed for abandonment or deactivation.

(C) For logging road watercourse crossings that are not within the harvest area but are under the ownership or control of the owner of the timberland where timber is proposed for harvest and that are between the harvest area and the first public road to be used for log hauling:

(i) Constructed and reconstructed logging road watercourse crossings that will be used for log hauling.

(ii) Existing logging road watercourse crossings to be abandoned or deactivated.

Existing logging road watercourse crossings may be shown by depicting the intersection of a logging road and a watercourse.

(8) ~~**(7)** Road failures on existing roads to be reconstructed.~~

~~**(8)**~~ Location of all tractor road watercourse crossings of classified watercourses except temporary crossings of class III watercourses that are dry at the time of use ~~without flowing water during timber operations at that crossing~~.

(9) Location of erosion hazard rating areas, if more than one rating exists.

(10) Location of watercourses and lakes with Class I, II, III or IV waters.

(11) Location of known unstable areas or slides.

(12) Location of unique areas.

Amend § 1093.2. Contents of Road Management Plan.

The Road Management Plan shall, at a minimum, contain the following information:*****

*****__(3)__ The operational element shall, at a minimum, address proposed road management operations, stated time frames for actions, clear lines of responsibility for implementation, and schedules to be implemented in a plan, including:

__(A)__ A road construction, reconstruction and use component to ensure that operations occur on a stable operating surface, consistent with 14 CCR 923.6. ~~that does not produce sediment in quantities that may cause a visible increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or would violate Water Quality Requirements.~~ This component shall include, at a minimum, restrictions for wet weather operations, surfacing objectives, and provisions for water drafting.*****

Amend § 1104.1. Conversion Exemptions.

Timber operations conducted under this subsection shall be exempt from conversion permit and timber harvesting plan requirements of this article*****

*****__(E)__ Timber operations may be conducted during the winter period. Tractor operations in the winter period are allowed under any of the following conditions:

__1.__ During dry, rainless periods but shall not be conducted on saturated soil conditions that may produce significant sediment discharge. ~~sediment in quantities sufficient to cause a visible~~

~~increase in turbidity of downstream waters in receiving Class I, II, III or IV waters or that violate Water Quality Requirements.~~ Erosion control structures shall be installed on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.*****

End as of 12/16/11